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ORAL PRESENTATIONS

SESSION: HIV – FUNCTIONAL CURE

O1 Short-term evaluation of immediately-treated patients with acute HIV infection, recently diagnosed in the National Institute for Infectious Diseases "Prof. Dr. Matei Bals", Bucharest, Romania

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Background: The rapidly-put-on-treatment in acute HIV infection (AHI) seems to achieve functional cure in up to 15% cases. This represents a huge difference, spontaneous elite-controllers being less than 0.5%. Objective: To identify the AHI patients and to observe the immune-virological course under immediately-started antiretroviral treatment (ART).

Methods: All newly-diagnosed HIV-infected adults (>18 yo) in the last 18 months (01.2013-06.2014) in an infectious diseases hospital were included. The including criteria for AHI group were: detectable HIV-RNA or positive antigen/antibody combination assays in the setting of a negative/indeterminate HIV Western blot. AHI group was classified accordingly to Fiebig stages and was further evaluated regarding CD4 count and viral load (VL) at diagnosis, at 3 and 6 months. ART initiation and the regimen were also registered.

Results: 804 adults were newly-diagnosed HIV-positive, out of which 26 patients (2.32%) with AHI. The number of patients in Fiebig II/III, IV, V and VI stages was 8, 15, 2 and 1 respectively. The AHI-group had a median age of 31, IQR [25-34] and 3:1:1 male/female ratio. The median CD4 count was 435, IQR [251-775] and the median VL was 5.6 log10, IQR [4.7-7]. Eight out of 26 AHI patients immediately started ART, in Fiebig II/III and IV stages for 7 of them. The 8th received ARV treatment in eclipse phase (for 28 days, as post-exposure prophylaxis) then restarted ART in Fiebig VI stage, at diagnosis moment. The immediately-treated group had a median age of 24, IQR [20-29], a male/female ratio of 7:1 and all were symptomatic. The median CD4 count at diagnosis was 261, IQR [147-467] and the median VL was 7 log10, IQR [5.6-7], except the partially-treated in eclipse-phase patient, whose CD4 count was 789 and VL was 21977c/mL at diagnosis. In the immediately-treated group there was a rise in median CD4 count to 646, IQR [544-764] at month 3 and to 755, IQR [577-950] at month 6. The median VL declines to 1.6 log10, IQR [1.3-2.2] at month 6. Five patients received a 3-drugs regimen and 3 received a 4-drugs regimen. The immune-virological course couldn’t be correlated with a particular regimen or with the number of drugs used.

Conclusion: Two percent of newly diagnosed HIV-infected patient in 18 months in our setting had AHI and one third of them received immediate treatment. The short-term benefit was the consistent immune-virological improvement, regardless of ART scheme. However, more than half had detectable VL at month 6, probable due to the very high initial VL.

O2 HIV low-level persistent viremia under new antiretroviral regimens: what have we learned up to this point?

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Background: The current goal of antiretroviral treatment (ART) is to achieve and maintain virological suppression below limits of detection (<50 copies/mL). Despite a potent ART, some patients experience persistently low viral loads (VL), between 50-1000 copies/mL. The long-term consequences of persistent low-level viremia (LLV) are negative, usually predicting a virological failure.

Methods: A cohort, retrospective study was conducted in Adult Clinic I of the National Institute for Infectious Diseases "Prof. Dr. Matei Bals", Bucharest, over a 6 year-period (01.2008-12.2013). The main inclusion criteria were: HIV-positive patients stable on ART (>6 months) at their first regimen, good adherence and absence of other medication susceptible for drug-drug interactions with ART.
We recorded the demographical data (age/gender), the HIV transmission route, CDC stage, the baseline immune-virological status (CD4 count, HIV-VL and genotypic mutations) and ART regimen. There were also registered subsequently CD4 count and HIV-VL (biannually taken). We then analyzed the management of the patients found with LLV: maintaining the current ART regimen and close monitoring, ART intensification or ART switch. LLV was defined as VL >50 and <1000 copies/mL in at least 2 determinations over a 24-week period, after at least 24 weeks of stable ART.

Results: Of 61 patients screened, 35 met the inclusion criteria. The median age was 38 years, (IQR, 32-51) and 71.4% (n=25) were male. According to 1993 CDC classification, 42.8% (n=15) were A2 and 22.8% (n=8) were C3. Sixty percent (n=21) were heterosexually infected. The median baseline CD4 count was 292 cells/cmm (IQR, 179-376), and median VL was 5.1 log10 copies/mL (IQR, 4.4-5.4). Two patients had detectable baseline mutations. All ART regimens contained 2 NRTI plus one as following: boosted-lopinavir (11 patients), efavirenz (10 patients), boosted-darunavir (6 patients), boosted-atazanavir (5 patients) and raltegravir (3 patients). Of 11 patients (31.4%) who had detectable VL at 6 months, 5 met the LVL definition criteria. Their median VL count was 551/cmm. None of them had baseline mutations. They didn’t have changes in the current ART regimen, except one patient in whom we increased darunavir dose to 1200 mg/day. At 12 months their median CD4 count raised to 743/cmm and the median VL declined to 150 copies/mL.

Conclusion: Although none of the patients with LLV became undetectable at 12 months of treatment, their VL levels decreased progressively in line with the increase in CD4 count in the absence of ART changing.

03 Is functional cure achievable in children perinatally exposed to HIV?
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BMC Infectious Diseases 2014, 14(Suppl 7):03

Background: A successful therapeutic course in children infected with HIV relies heavily on their adherence to antiretroviral treatment (ART). The adherence is influenced by every child’s particularities, his or her family or caregivers and, last but not least, by the selected therapeutic regimen. In newborns and toddlers, who depend completely on their family or caregivers, issues affecting adherence are essential.

Methods: We analyzed a lot of 43 children infected with HIV through mother to child transmission – newborns and toddlers – born between 2008 and 2013, focusing on specific factors of the caregivers that affected adherence to ART. From the patients’ files we collected data about the prescribed regimen, the last prescription date, the syrup quantity prescribed per day, the number of days prescribed in conjunction with regular assessment of the viral load. Caregivers may include the child’s parents, grandparents, other relatives, or guardians who directly influenced the child’s medication dosing.

Results: 84% of children were born to mothers recently infected with HIV, either through unsafe sex or injecting drug use. Adherence in this group of children maintained a value of 50% compared with the value of 58% in children born to mothers who belong to the 1988-1990s cohort. Assessment of adherence from the viewpoint of socioeconomic status emphasized a 34% value in families with precarious economic status and a 60% value for families with high economic and social levels. Children from mothers with low levels of education were 42% adherent to treatment, compared with 63% adherence in children whose mothers accessed basic or academic education. One of the most significant differences was registered in institutionalized children - 80% compared to children in biological families - 47%.

Conclusion: Despite of the latest progress in the treatment destined to children with HIV infection – from the discovery of new drugs to formulas tailored to children of various ages (syrup, chewable tablets) – ART options for newborns and toddlers continue to be limited. Given this, adherence to treatment of this pediatric category depends fully on the family or caregivers. In order to make this a reality it is essential to encourage families to access medical services and help them understand the evolution of the diseases and the benefits of treatment.

04 Whole-body DXA evaluation in HIV patients
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Background: After the introduction of highly active antiretroviral therapy for the treatment of HIV infection, metabolic abnormalities were increasingly observed, associated with both protease inhibitors and nucleoside reverse transcriptase inhibitors, characterized by abnormal fat distribution in the body (lipatrophy, lipohypertrophy or both), hyperglycemia and lean tissue mass wasting. However such metabolic changes are not always treatment related, having a multifactorial etiology. Dual-energy X-ray absorptiometry (DXA) evaluates the quantity of body fat and lean tissue and their distribution, allowing the diagnosis of both quantitative and qualitative changes.

Methods: We evaluated 58 patients (26 females and 33 males), aged between 19 and 65 years, by whole body DXA scan. Biological tests on the patients included: leptin, adiponectin, resistin, TNFa, IL6, LT CD4+, viral load. Body mass index, waist/hip ratio and waist/height ratio were also calculated.

Results: We obtained significant correlations between the DXA data and the biological, clinical parameters, type and duration of the treatment.

Conclusion: DXA represent an essential tool in evaluation of HIV lipodystrophy and wasting syndrome and can be used for both treatment monitoring and disease metabolic evaluation of HIV patients.

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05 HIV stigma in Romania – from the generation of nosocomially-infected children to the new generation of injecting drug users. Results from a qualitative study
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BMC Infectious Diseases 2014, 14(Suppl 7):05

Background: As a result of treatment advances, HIV is a chronic condition in Romania, but stigma is still a challenge for people living with HIV (PLHIV). More than half of all registered PLHIV were nosocomially-infected between 1988-1990, followed by adults sexually-infected, but in the last three years HIV infection exploded among injecting drug users (IDU). The objective of the present study was to explain the variations of HIV stigma in these three different social groups and the coping strategies used to be resilient.

Methods: Thematic analysis was performed based on twenty in-depth interviews with PLHIV from three groups: (G1) those from the generation 1988-1990, (G2) PLHIV infected as adults (2000), (G3) the new group of HIV=IDU.

Results: At different levels, stigma is present among all groups. In G1, stigma was experienced more severely in the early years of the infection more by the family and less sensed by themselves; now they tend to hide their status developing a jargon/encrypted language in the communication with members of the same group (e.g. on social media such as Facebook) to prevent stigma.
In G2 on one hand there are people with a longer history of the infection who experienced stigma after disclosure now being reluctant to further disclose and on the other hand there are those who stay in secrecy (sometimes even from family members), trying to continue their life as if HIV is not present.

For G3 beside HIV stigma (anticipated and internalized) appears one associated with drug use or other addictive behaviors (e.g. alcoholism), sometimes even from other PLHIV (e.g. from G1 and G2) or from healthcare staff.

The resilient ones are those managing better their stigma (i.e. controlled disclosure), who have family support and are socially active in G1 and G2 while those overprotected by the family from G1 strive for normality (wished to have a family, children, a job). In G3 family, peers and religious beliefs act as resilience factors.

Conclusion: Health and psychosocial professionals need to understand how stigma impacts differently the life of their patients/clients, what are the triggers for resilience and how to adjust their interventions to optimize results.

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07 Patients’ expectations versus doctors’ expectations in antiretroviral therapy
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BMC Infectious Diseases 2014, 14(Suppl 7):S7

Background: Antiretroviral therapy (ART) is essential in maintaining a low HIV viral load, which allows the immune system to function properly and assures a qualitative life style for HIV positive patients. However, low rates of adherence to ART are still registered, in spite of all efforts. This paper aims to uncover what patients really expect from ART, and also what infectious diseases doctors expect from a patient’s ART regimen, thus exploring an important side of adherence to ART.

Methods: From January to July 2014 we have conducted a qualitative study regarding both patients’ and doctors’ expectations regarding ART. We interviewed 30 patients and 4 doctors. We used semi-structured interviews that were conducted in the Psychosocial Compartment of the HIV/AIDS Regional Center in Iași.

Results: The patients we interviewed came from all 6 counties in the Moldova area. Age varied from 16 years to 59 years; 55% were female and 45% male. 30% came from a rural area.

The most common expectations that patients have regarding ART are: “to help me live”, “not to make me feel sick”, “to be easy to take (not to big, not a lot)”, “not to show on the outside what I have on the inside”.

The infectious diseases doctors that we interviewed work in the HIV/AIDS Regional Center in Iași. Their expectations regarding ART is that for patients were: “to reduce HIV viral load”, “to increase CD4 cell count” and “to have minimal impact on the proper functioning of other organs”.

Conclusion: Patients’ expectations from ART show the importance they give to the impact that the therapy has on their overall quality of life, especially on their body’s reaction to medication. Multiple side effects – nausea, diarrhea, headaches, skin rash, etc., or a large number of pills to take are, for patients, signs that the therapy did not meet their expectations and therefore a reason to stop taking it.

Doctors expect pragmatic results from ART, focusing on the medical aspects. Their perspective is centered less on the overall quality of life of the patient, and that is why often the doctor-patient relationship has to suffer.

In order to assure adherence to the ART it is important to explore both the doctor and the patient’s perspective and to find ways to find a common ground in building a healthy relationship. A healthy mediation is provided by the psychologist working directly with both parties.

08 The National Registry of pregnant women infected with HIV and of perinatally exposed children – a need for Romania?
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Background: The recent years' experience made us face a new typology of HIV cases (the outbreak within the people who inject drugs) as well as the necessity to adapt specific cares to the needs of the patients coming from the 1987-1990 cohort. The latter presents a complex pathology: they are therapeutically multi experienced, have adherence and ART resistance problems and experience advanced stages of disease. Furthermore, most of them have reached a fertile age, giving birth to a new generation of HIV children, which makes us update our approach to HIV infection. The National Registry of pregnant women-infected with HIV and of perinatally exposed children...
exposed children represents an operational tool that collects data on the item „mother-child”, whose main role is to clearly display a national overview on the phenomenon of mother to child transmission. The registry sides with a prospective observational study launched at 1 January 2014 that focuses on HBV-infected women and HBV exposed children from all the regions in Romania. 

Methods: The Registry stores personal data on both mothers and children, the child’s medical history (physiological and pathology data), initial investigations, investigations at 6 and 18 months of surveillance; the mother’s personal data, time of HIV diagnosis, risk factors, disease and therapeutic history, peripartum immunological and virological investigation, as well as information about the father and siblings.

Results: Throughout 6 months of reporting we registered 97 cases of exposed children. 55% (54) come from newly detected mothers, 44% (43) from mothers belonging to the 1987-1990 cohort. 18% of children were also exposed to the drugs their mothers used, 18% to the mothers’ HCV and 26% to HBV. From the total number of children, 6.18% (6) had detectable viral load at birth. Regarding children infected with HBV, 4 were delivered naturally, 2 by C-section; 4 of them were breastfed and 2 received formula.

All mothers in this group were late presenters, namely they were detected during pregnancy, during delivery or immediately after birth.

Conclusion: Although HIV screening for pregnant women is free and universal in Romania, a high number of women are late presenters, which hinders any prophylactic measure to reduce the transmission of HIV from mother to child. Our 6 months assessment reveals that out of 97 exposed children, 6 presented detectable viral loads (6.18%) at the first screening.

In all these cases the cause was the lack of or a precipariously applied prophylaxis.

SESSION: CURE FOR VIRAL HEPATITIS

09 Antiretroviral treatment and association with prematurity in perinatal HBV-exposed children

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Background: In the last years there is a great concern regarding the effect of HIV and antiretroviral drugs in children born by treated HIV-infected mothers.

We started a prospective cohort study regarding HIV and antiretroviral exposure in children followed in the Pediatric HIV Department from the National Institute for Infectious Diseases "Prof. Dr. Matei Balș", Bucharest. 

Methods: We analyzed the data reported for children perinatally-exposed to HIV followed up in our Department from January 1st 2006 to December 31st 2012. The patients were followed up for 18 month after birth to establish the HIV status; gestational age, birth defects and mother treatment were noted.

Results: From 206 children with complete 18 months follow up, 21% (43 cases) were diagnosed with HIV infection and more than 33% had at least one congenital condition. We found birth defects in various organs in studied children: heart (130 cases), musculoskeletal system (47 cases), kidney (20 cases), nervous system (20 cases), digestive tract (10 cases) and metabolic and genetic disorders (2 cases each). 26 from the 163 HIV-exposed children and 6 from the 43 HBV-exposed infants were born before 37 weeks of gestation. 4 HIV-exposed and 4 HBV-infected children were small for gestational age.

We found low birth weight (<2500 g) in 18 HIV-exposed children and 3 HIV infected children and extremely low birth weight (1000 g) in one HIV-exposed child.

We found congenital malformation in 11 preterm HIV-exposed children and 2 preterm HBV-infected children, but also in 38 HBV-exposed children and 19 HIV-infected babies with normal gestation period.

The difference between the rate of congenital malformation and prematurity was not statistically significant (p=0.08) in any of studied groups and HIV diagnosis was not associated with a higher risk of preterm birth (p=0.93). Mother being part of the Romanian cohort was not statistically associated with higher risk of prematurity. We found a significant association between antiretroviral treatment during pregnancy and prematurity (p=0.003). The most used drugs to treat mothers were boosted protease inhibitors (99% cases).

Conclusion: In the studied patients we found high risk of prematurity in babies exposed in utero to antiretrovirals, but no association between prematurity and HIV infection in children or mother being part of Romanian cohort.

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010 Treatment of chronic HBV hepatitis – between immune control and virological control

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Background: According to international guidelines, the treatment of HBV hepatitis can use both pegylated interferon (IFN) and nucleoside/nucleotide analogues with high genetic barrier (NNA). The main advantage of IFN based regimen is the possibility of immune control after a therapy with finite duration. The main advantage of NNA is the virological control during lifelong therapy. Objectives: To estimate the level of immune control after IFN therapy and the level of virological control during NNA. 

Methods: Retrospective analysis of HBV infected patients treated in Third Department of Matei Balș Institute, between 2008 and 2014: group 1 – patients who finished IFN therapy and group 2 – patients who received more than 6 months of NNA.

Results: Of more than 1500 HBV infected patients monitored in our Department, 213 patients received antiviral therapy: 64 patients IFN and 149 patients, NNA. Fifty-six patients in group 1 and 129 patients from group 2 met the inclusion criteria. The demographic characteristics were: in group 1 mean age – 38.51-year-old and sex ratio M/F = 1.4:1 and in group 2 mean age – 47.32 and sex ratio M/F=2:2.1. The rate of immune control (defined as HBV viral load <2000 IU/mL) in group 1 was 41%, the mean duration of follow-up was 41.21 months. Thirty-two patients from group 1 had a viral load >2000 IU/mL during the follow-up period and were subsequently treated with NNA after a mean period of 14.15 months. HBsAg loss was observed in 6 patients (10.71%) and anti-HBs seroconversion in 3 patients (23.21%). Thirteen patients were HBeAg positive and 5 of them developed anti-HBe antibodies (38.46%). Other 2 patients had HBsAg negative at EOT but after 6 months, HBsAg was positive again. In group 2 the rate of virological control (defined as undetectable viral load) was 77.34%. In 3 cases virological failure was recorded. Of 29 patients without virological control, 24 had viral load >LLQ. The mean duration of NNA therapy was 32 months. Nineteen patients had HBeAg positive and in 5 cases (26.32%) anti-HBe seroconversion was obtained, after a mean period of 36.4 months. The mean duration until viral load was undetectable was 32 months. Only one patient registered HBsAg loss, without anti-HBs seroconversion (0.77%).

Conclusion: After IFN therapy more than 40% patients obtained immune control. This rate could be higher if response guided therapy is used. During NNA therapy the rate of virological control is almost 80% but lifelong therapy is necessary.
O11  
**HBV reactivation under immunosuppressive treatment – a case series**  
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**Background:** Inactive HBV carriers, under immunosuppressive treatment for malignancies or rheumatologic diseases, have an increased risk for HBV reactivation. HBV reactivation under immunosuppressive treatment has a high rate of acute liver failure and death. HBV screening is mandatory for patients with hematologic malignancies or rheumatologic diseases who are due to receive immunosuppressive treatment.

**Methods:** We retrospectively analyzed 13 patients from Department 3 of the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” that were diagnosed with HBV reactivation under immunosuppressive treatment for different malignancies or rheumatologic diseases.

**Results:** Thirteen patients were enrolled, 6 women and 7 men, with a median age of 56 years (32.70). Seven patients were diagnosed with hematologic malignancies (6 with non-Hodgkin lymphoma and 1 with chronic lymphatic leukemia), 4 with rheumatologic diseases (1 with ankylosing spondylitis, 1 with Reiter syndrome and 2 with rheumatoid arthritis), 1 patient with ovarian cancer and 1 patient with renal transplant. Of 13 patients, 1 had negative HBsAg and protective HBs antibodies titers, before immunosuppressive treatment, with further HBs retroconversion.

On admission, TGP median value was 1,125 IU/dL [491-1738]. Median prothrombin concentration on admission was 85% [68-101] and median nadir of prothrombin concentration was 66% [54-84].

Median hospitalization period was 20.77 days. Hospitalization period was directly correlated with ALT and AST values at the time of admission (p=0.06 respectively p=0.015) and negatively correlated with prothrombin concentration at admission (p=0.039) and lymphocytes number (p=0.058).

Ten patients were treated with entecavir and three with lamivudine. Three patients died, all of them with hematologic malignancies – two deaths were due to hematologic disease and one due to liver failure. Median age of deceased patients was 73 years [68.0-75.0], while in the surviving group the median age was 50 years [27.7-58.5] (p=0.049).

**Conclusion:** In HBV reactivation patients, older age is a risk factor for mortality. Higher liver transaminases and lower prothrombin concentration and lymphocytes are associated with longer hospitalization period. Even patients with negative HBs can reactivate HBV infection during immunosuppression, requiring close monitoring.

O12  
**Clinical and epidemiological features of acute hepatitis D virus in Republic of Moldova**  
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BMC Infectious Diseases 2014, 14(Suppl 7):O12  

**Background:** An estimated 10 million people worldwide have dual infection with hepatitis D (HDV) and hepatitis B viruses (HBV). Hepatitis D occurs in populations at risk of hepatitis B virus infection.  

**Methods:** A group of 26 patients who were hospitalized in the Toma Ciorbă Infectious Diseases Clinical Hospital with acute hepatitis D diagnosis, confirmed by total anti-HDV antibodies and anti-HDV IgM findings using ELISA method and exclusion of other type of hepatitis.

**Results:** Acute HDV in both sexes has been observed: women – 7 (26.9%), men – 19 (73.1%). Hepatitis D virus infection occurred through: surgical maneuvers in 2 patients (7.7%), dental – 5 (19.2%), sexual – (7.7%), 3 (11.5%) – intrafamilial and undetermined way – 14 (53.9%). The acute onset was in 26 patients (100%), being manifested more frequently in icteric form in 21 (80.8%), than anicteric form – in 5 (19.2%). In 12 patients (46.2%), acute HDV occurs in moderate form and in 14 patients (53.8%) – in severe form. Acute HDV includes asthenic, dyspeptic and arthralgic syndrome. Biochemical investigations: bilirubin – 194.7±13.67 mkmol/L, ALAT – 107.3±9.70 mmol/L/h (p<0.001), thymol – 8.74±1.32 U and prothrombin index – 71.87±2.57%. Hepatomegaly 3.4±0.16 cm – in 100%, splenomegaly 2.0±0.18 cm – in 73.1% patients. Duration of hospitalization constituted 20.73±6.66 days.

**Conclusion:** Acute hepatitis D viral affects men more frequently than women, and is manifested through acute onset in the icteric form, severe form being characterized clinically by the dyseptic, asthenic, arthralgic and biochemical syndrome through the ALT activity increase, bilirubin, and thymol test. The highest rate of infection was found to be intrafamilial.

O13  
**Distinctive personality patterns in patients with chronic viral hepatitis**  
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**Background:** Minnesota Multiphasic Personality Inventory (MPMI) is a tool that provides information on adult personality and psychopathology. We have performed a study to determine personality patterns in patients with chronic viral hepatitis.

**Methods:** We assessed patients with chronic hepatitis B and C as well as a control group, using the MPMI-2 standardized psychometric tool. The subjects were evaluated during an appointment with the clinical psychologist in July 2014. For statistical purposes, the T score was used to compare the results between different groups.

**Results:** We have evaluated 29 patients with chronic viral hepatitis (21 females and 8 males – 9 with HBV and 20 with HCV) and 28 subjects for the control group (18 females and 10 males). The mean age in patients with chronic hepatitis was 47.97±13.63 vs. 31.36±8.28 in the control group. Comparing the results between the control group and the two subgroups with HBV and HCV infection we obtained the following statistically significant differences:

- The HBV group presented 31 scales with significant differences compared to controls, with elevated scores for: OBS (obsessiveness), DEP (depression), ANG (anger), TPA (type A personality) and TRT (negative treatment indicators) scales and subscales TRT1 (low motivation) and TRT2 (inability to disclose), etc.
- The HCV group presented 7 scales with significant differences compared to controls, with elevated scores mostly for scales related to the somatic connection.

We also identified statistically significant differences between the two chronic hepatitis subgroups (namely 27 scales related to OBS (obsessiveness), DEP1 (lack of drive), ANG2 (irritability), and CYN (cynicism).

**Conclusion:** Based on the results of this study, we can conclude that there seem to be certain distinctive personality patterns in patients with chronic HBV and HCV infection. These results outline the utility of psychological assessment with specialized instruments in order to include psychological variables in the clinical framework and to improve the clinical decision-making process.

O14  
**Metabolic risk factors for liver inflammation in a cohort of chronic hepatitis C patients**  
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Background: Beside the classic risk factors for disease progression in chronic hepatitis C (CHC) patients, metabolic disturbances came to attention in the last decade as important factors influencing disease progression and liver activity. This study aimed to evaluate metabolic factors in relation to liver inflammation in a cohort of CHC patients.

Methods: We conducted a cross-sectional non-interventional study on CHC patients evaluated in a tertiary hospital in Bucharest between December 2012-August 2013. We measured fasting serum lipids, glucose, liver transaminases, inflammatory proteins, and viral load. We calculated body-mass index (BMI) and waist-to-hip ratio (WTH). Cardiovascular risk was assessed with Framingham risk score, metabolic syndrome was defined with ATPIII criteria. Liver histology was assessed with non-invasive Fibromax tests (Biopredictive, France). For statistical analysis we used SPSS (version 12.0).

Results: We enrolled 117 CHC patients compared to 30 uninfected controls. Median age was 54 years (45-61), sex ratio was F:M 1.8. Sixty-one patients (52.1%) had low-grade activity score (A0-1) and 56 (47.8%) had important liver activity (A2-3). In univariate analysis liver activity score (ActiScore) was correlated to age (Spearman rho=0.353, p<0.001). ActiScore was correlated to FibroScore, SteatoScore and NashScore (Spearman rho=0.770, 0.528, 0.439, p<0.001 for all comparisons). Also ActiScore was correlated to viral load (rho=0.262, p=0.023). Regarding metabolic factors, ActiScore was positively correlated to waist circumference and WH ratio (rho=0.200, p=0.034, respectively rho=0.290, p=0.002) and inversely correlated to serum cholesterol and LDL (rho=-0.262 and -0.294, p=0.005 for both). Also ActiScore was negatively correlated to C-reactive protein and serum fibrinogen (rho=-0.318, p=0.001 and rho=-0.340, p<0.001).

The number of criteria for metabolic syndrome and Framingham risk score were correlated to ActiScore (rho=0.211, p=0.034, respectively rho=0.510, p<0.001). When we compared low activity (A0-1) to high activity (A2-3) patients in logistic regression, risk factors for high activity were age (OR 1.07), SteatoScore (OR 3.93) and NashScore (OR 3.79, p<0.001 for all variables), while serum cholesterol, C-reactive protein and fibrinogen were protective factors (OR 0.042, 0.062, 0.071, p=0.004, 0.025 and 0.008).

Conclusion: In CHC patients’ metabolic factors play an important role in disease activity. Liver metabolic disease had a negative predictive role, while serum cholesterol and inflammatory markers seemed to have a protective role against liver inflammation.

O15 Performance of shear-waves elastography in the non-invasive assessment of liver fibrosis in chronic hepatitis in the Romanian population

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Background: Liver fibrosis is one of the major factors associated with progression of liver disease in chronic HBV [1] or HCV [2,3] infection, but also in metabolic diseases with impact on the liver.

Methods: We have performed a study to determine liver stiffness in patients with chronic hepatitis in Romania. One trained operator performed shear-waves elastography (SWE) using Aixplorer (SuperSonic Imagine, Aix-en-Provence, France) in all consecutive patients monitored in our clinic over the course of 7 months, from January 2014 to July 2014.

Results: We have examined a total of 80 patients with chronic hepatitis, of which 58.8% had HBV infection, 16.3% HCV infection, 6.3% HBV+HCV coinfection, 2.5% ASH, 2.5% HIV infection and 13.8% had idiopathic liver involvement. The male-to-female ratio was 0.86:1, and the mean age was 48±14.9 years.

The mean duration of hepatitis evolution was 7.6±5.7 years, longer for HCV infection (mean 8.3±5.9 years) than for HBV infection (4.7±3.9 years, p=0.028). The overall mean SWE liver stiffness was 9.6±5.3 kPa, higher in patients with HCV infection (10.8±5.9 kPa) than in those with HBV infection (6.98±1.9 kPa, p=0.009). Overall, 37.5% of patients were classified as F0-F1 on SWE, 25.0% F2, 8.8% F3 and 28.7% F4.

Liver cirrhosis was present in 28.7% of patients and hepatocellular carcinoma had already been diagnosed in 6.3% of all patients and in 21.7% of all patients with cirrhosis (5 cases, of which 4 had been previously diagnosed with cirrhosis with HCV – 3 cases, and HBV+HDV – 1 case, and 1 had an idiopathic cause for liver involvement and a stiffness corresponding to F0-F1 on SWE).

Conclusion: There seem to be significant differences between two of the main groups of patients examined, with a longer duration of infection and an accordingly higher liver stiffness in the chronic HCV group, when compared to the chronic HBV group.

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References

O16 Tumor necrosis factor alpha – an useful biomarker in a combined predictive model for liver fibrosis staging in patients with chronic HCV infection

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Background: Staging liver fibrosis in chronic HCV infection represents an important step for an individualized management. In the last decade the liver biopsy was less used for fibrosis staging due to its invasive nature and risk of complications. Multiple non-invasive methods were developed for the evaluation of liver fibrosis, none of these being an ideal one. The aim of this study was to evaluate the diagnostic accuracy of a new non-invasive method designed to differentiate patients with significant liver fibrosis from those without. (F2-F4 vs. F0-F1).

Methods: We conducted a cross-sectional study in patients with chronic HCV infection, in a tertiary-care hospital, from November 2012 until April 2013. Blood samples were collected for: aspartat-aminotransferase (AST), alanine aminotransferase (ALT), gamma-glutamyl transpeptidase (GGT), total bilirubin (TB), albumin, total cholesterol (CH), triglycerides (TG), fasting glucose (GLU), white blood cells (WBC), platelets (PLT) and tumor necrosis factor alpha (TNFa). We used DiAsource ImmunoAssay, Louvain-la-Neuve, Belgium, for TNFa plasma levels quantification. Liver fibrosis was estimated in all patients using FibroMax® (Biopredictive, France).

Results: We included 114 consecutive patients and we divided them into 2 groups: estimation group – 79 patients and validation group – 35 patients. There were no significant differences between the 2 groups regarding sex ratio, median age, liver fibrosis score or biochemical and inflammation variables. We found a statistical correlation between the liver fibrosis score estimated by FibroMax and age, ALT, GGT, TB, CH, GLU, PLT and TNFa that proved to be useful for identification of patients with significant liver fibrosis. The area under the ROC curve was 0.887 for the estimation group and 0.875 for the validation group. Using the best cut-off value (+1.06) the score positive predictive value was 90%. In the estimation group 51% (40/79) of patients were diagnosed with significant fibrosis whereas in the validation group the percent of patients with significant fibrosis was 54% (19/35).

Conclusion: A score combining age of the patient, TB, PLT count and TNFa value could be an accessible and accurate tool for the identification of significant liver fibrosis in patients with chronic HCV infection.
SESSION: ANTIBIOTICS – TIME TO CURE. MDR XDR TREATMENT OPTIONS.

O17
Associated infectious diseases in psychiatric patients who are hospitalized for long periods in a hospital in Braila
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Background: Adult patients with severe psychical diseases are hospitalized in a separate building (ward) for very long periods of time (years). This ward has 140 beds and belongs to the Psychiatric Hospital “St.Pantelimon” in Braila. Sometimes they live here for their entire life. In this situation they can develop several diseases, infectious and non-infectious, which need a special medical survey to prevent epidemics or complicated diseases.

Methods: I studied 140 patients hospitalized in this ward in a period of 5 months (March to July 2014). I studied medical documents and I directly observed these patients. The eldest patient had spent 45 years in this institution and the most recent, 5 months. The oldest was 82 years old and the youngest was 21 years old. I studied the methods used for cleaning and disinfection (for people and environment), the substances used and working protocols for the prevention and control of nosocomial infections.

Results: I discovered with a frequency lower than expected, different infectious diseases: respiratory (tuberculosis, acute respiratory illness of the upper and inferior tract), digestive (frequent gastro-enterocolitis, intestinal parasitosis), skin infectious (postrummaural cellulitis, infections because of lying down for long time, herpes zoster), rare urinary tract infections. The problem is because these kind of patients often exaggerate (over or under) the symptoms, or may become immune to some germs in time. Sanitary alcohol and alcohol-based substances are very strictly used only by medical staff, because of the risk for alcohol addicted patients. Hygiene rules are different from other acute wards because of these patients’ characteristics.

Conclusion: Associated infectious diseases in psychiatric patients who are hospitalized for very long periods are quite rare, even if the risk is permanent. Medical staff adapted hygienic and epidemiological rules to the patients and to special conditions. I think it is necessary to adapt the sanitary rules – by collaboration of epidemiologist, infectious disease and psychiatric specialists – to make easier the identification of diseases that could be contagious in such a hospital.

O18
Infectious complications in heart transplant patients
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Background: Up to 75% of the patients with heart transplant present signs of an infectious episode within the first year post-heart transplant. Objectives: assessment of infections prevalence, correlation between cytomegalovirus (CMV) infection and post-transplant complications, occurrence of acute rejection and allograft vessel disease. Methods: 37 patients who underwent orthotopic heart transplantation have been followed for a period of five years. Post-transplantation screening has been performed over the following etiologic agents: CMV, hepatitis B virus, hepatitis C virus, Epstein-Barr virus and Toxoplasma gondii. Receptors with criteria for CMV IgG and Toxoplasma IgG antibodies have been accepted. Infectious episodes at 1, 6 and 12 months and evolution depending on CMV screening results, correlated with infection, acute rejection and allograft vessel disease have been pursued. Microbiological techniques, echocardiography, chest X-ray and endomyocardial biopsy have been performed for diagnosis.

Results: The mean age of patients was 38.5 years. Within the range of 1 to 6 months, a number of 50 infectious episodes (IE) were identified, with an average rate of 1.35 IE occurrences per patient. After 6 months 68 IE were identified, with an average rate of 1.83 IE occurrences per patient. After 1 year, 22 IE were identified with an average rate of 0.59 IE occurrences per patient. Following the correlation between CMV IgG antibodies after one year and bacterial infections, 2 pulmonary infections, 4 cases of upper respiratory tract infections, 3 cases of urinary tract infections, and one sepsis case were noted. Concerning the viral infections, out of the 26 patients with CMV IgG positive antibodies 16 (61.5%) did not develop infections, 6 patients were CMV IgM antibodies positive, 3 were noted with viral pneumonia, 2 varicella zoster virus cases and one with herpes simplex virus infection were also found. The correlation between the presence or absence of CMV IgG antibodies and rejection score has been followed. 9 CMV IgG antibody positive patients (34.6%) had the rejection score 1, 11 (57.7%) were found with rejection score 0. In CMV serology negative patients a 0 to 6 out of 11 rejection score (54.5%) was identified. The four allograft vessel diseases recorded in the study group were found in CMV IgG antibodies patients.

Conclusion: During the evolution a decrease in survival rate related to CMV chronic infection has not been observed, but its role in the development of allograft vessel disease has been confirmed.

O19
Assessment of bacteriophage activity against local strains of Enterococcus and Pseudomonas in Romania
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Background: Enterococcus faecium and Pseudomonas aeruginosa are part of the ESCAPE pathogens, which have the ability to “escape” the currently available therapeutic options. For these germs alternatives are needed, as is the case of bacteriophage treatment.

Methods: In this study we used a bacteriophage testing kit containing 4 types of Georgian products: PYO, INTESTI (Elava Biopreparations, Tbilisi) and PHAGIO, PHAGESTI (JSC "Biochimpharm", Tbilisi) to test the strains of Pseudomonas spp. and Enterococcus spp. isolated and stored from patients treated in the Adults II ward of the National Institute for Infectious Diseases “Prof. Dr. Matei Balș”, Romania during April 2013 – July 2014.

Results: We identified 9 strains of Enterococcus (7 E. faecalis, 1 E. avium and 1 E. faecium) and 9 strains of Pseudomonas aeruginosa. The strains had been isolated mostly from cutaneous wounds (3/9) for Enterococcus spp. and from urine (5/9) for P. aeruginosa. For Enterococcus spp. the rate of susceptibility to PYO phages was 33.33% (3/9), to INTESTI 55.56% (5/9), to PHAGIO 44.44% (4/9) and to PHAGESTI 0% (0/9). We tested the Enterococcus ATCC, and it displayed susceptibility to PYO, INTESTI and PHAGIO. For Pseudomonas spp. the rate of susceptibility to PYO phages was 66.67% (6/9), to INTESTI 88.89% (8/9), to PHAGIO 55.56% (5/9), to PHAGESTI 44.44% (4/9). We tested the Pseudomonas ATCC, and it displayed susceptibility to all the bacteriophage products tested.

Performing the ANOVA test for Enterococcus spp. we identified a statistically significant correlation between susceptibility to ampicillin vs. PYO phages (p=0.034) and vs. INTESTI phages (p=0.024). For P. aeruginosa a correlation was identified between susceptibility to cefazidime and PYO phages (p=0.029).
Conclusion: Despite the fact that PYO and PHAGYO do not contain phages for Enterococcus spp., their activity against Enterococcus ATCC, too. For P. aeruginosa the rate of susceptibility was very high for phases, and quite low for almost all antibiotics tested. We intend to develop further studies for testing a higher number of strains and for assessing a potential synergy for co-administration of antibiotics and bacteriophages.

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O20

Serum inhibitory and bactericidal titers in the clinical management of bacterial infections
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Background: The clinical management of bacterial infection computes factors related to bacteria (e.g., resistance profile [1]), antibiotics (e.g., activity spectrum, distribution volume, etc.), host characteristics (e.g., vascularization of the infected tissue, effectiveness of host defenses, etc.), as well as pharmacokinetic (PK) parameters [2]. The serum inhibitory (SIT) and bactericidal titers (SBT) are laboratory tests that simulate the interactions between antibiotics and bacteria in the human body milieu.

Methods: In the Emergency Laboratory of the Adults 2 Clinical Ward of the National Institute for Infectious Diseases “Prof. Dr. Matei Balș”, we consistently perform SIT and SBT in complicated cases of bacterial infections. We have retrospectively collected and analyzed data from such tests performed between 2012 and 2014 and correlated the results with the patient’s overall clinical evolution. We present the descriptive results.

Results: We have analyzed 89 cases. The serum antibiotics tested were: linezolid (15 cases, 16.9%), carbapenems (12 cases, 13.5%) with (5 cases) and without (7 cases) colistin, aminopenicillins (10 cases, 11.2%), and in smaller percentages: oxacillin, tigecycline, fluoroquinolones, trimethoprim/sulfamethoxazole, glycopeptides, aminoglycosides, ceftriaxone and other cephalosporins.

In most cases serum samples were collected at the time of peak PK, with the exception of three cases where the trough concentration was examined instead. The tested germs were mostly Staphylococcus spp. (51.7%), followed by Enterococcus spp. (14.6%), Streptococcus spp. (9%) and Gram-negative bacilli (24.7%) such as: E. coli, Klebsiella spp. and Pseudomonas spp. The strains had been isolated from blood cultures (49.4%), cutaneous wounds (23.6%), tracheal aspirate (13.5%) and urine samples (7.9%).

SIT ranged from 1/2 (12.4%) to 1/512 (5.6%), but only in 20 cases (22.4%) the titers were in the therapeutic comfort range of 1/64 to 1/512. SBT ranged from 1/2 (12.4%) to 1/512 (5.6%), but only in 20 cases (22.4%) the titers were in the therapeutic comfort range of 1/64 to 1/512. SBT ranged from 1/2 (12.4%) to 1/512 (5.6%), but only in 20 cases (22.4%) the titers were in the therapeutic comfort range of 1/64 to 1/512. SBT ranged from 1/2 (12.4%) to 1/512 (5.6%), but only in 20 cases (22.4%) the titers were in the therapeutic comfort range of 1/64 to 1/512. SBT ranged from 1/2 (12.4%) to 1/512 (5.6%), but only in 20 cases (22.4%) the titers were in the therapeutic comfort range of 1/64 to 1/512. SBT ranged from 1/2 (12.4%) to 1/512 (5.6%), but only in 20 cases (22.4%) the titers were in the therapeutic comfort range of 1/64 to 1/512. SBT ranged from 1/2 (12.4%) to 1/512 (5.6%), but only in 20 cases (22.4%) the titers were in the therapeutic comfort range of 1/64 to 1/512.

Conclusion: Interdisciplinary patient management and good collaboration with the bacteriology laboratory all contribute to establishing, maintaining and adapting targeted antimicrobial therapy.

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References

O21

Nasopharyngeal microbiota evaluation in three cohorts of children in the Romanian pediatric population
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Background: The nasopharyngeal microbiota represents one of the key factors related to infectious diseases in children [1]. The infectious agents and their resistance patterns are main factors driving disease severity. Nasopharyngeal carriage is high in children, especially for Staphylococcus aureus [2,3].

Methods: We performed a screening study for nasopharyngeal carriage of Staphylococcus spp. in immunocompetent children aged 7-10 years old, attending a community school in central Bucharest (group 1), and in two groups of immunosuppressed children: children with hematopoietic dysplasias (lymphoma/leukemia) admitted to the Fundeni Clinical Institute, Bucharest (ages 2-10 years, group 2), and institutionalized children with vertically transmitted HIV infection, from the National Institute for Infectious Diseases “Prof. Dr. Matei Balș”, Bucharest (ages 1-10 years, group 3).

Results: We analyzed data from 139 pharyngeal swabs (35.3% in group 1, 56.1% group 2 and 8.6% group 3), and 143 nasal swabs (37.1% group 1, 54.5% group 2 and 8.4% group 3). Nasal cultures were positive for Staphylococcus spp. in 28.6% of children in group 1, 11.5% in group 2 (p=0.0075 vs. group 1) and 16.7% in group 3 (p=0.20045 vs. group 1). Of the positive pharyngeal samples, 92.9% were S. aureus in group 1, 100% in group 2 and 100% in group 3.

Nasal cultures were positive for Staphylococcus spp. in 84.9% of children in group 1, 46.7% group 2 (p<0.01 vs. group 1) and 50.0% group 3 (p=0.00391 vs. group 1). Of the positive nasal samples, 62.2% were identified as S. aureus in group 1, 94.6% in group 2 (p=0.0027 vs. group 1) and 66.7% in group 3.

Conclusion: Pharyngeal carriage of Staphylococcus strains was low, however when positive, most strains were S. aureus. Nasopharyngeal carriage was significantly higher in immunocompetent children from the community compared to immunosuppressed children. When present, S. aureus had a higher prevalence compared to coagulase-negative staphylococci (CoNS), particularly in immunosuppressed children.

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References

O22

Spondylodiscitis in Romania – between the risks of prolonged antimicrobial therapy and the poor access to neurosurgery
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Background: Spondylodiscitis defines both vertebral osteomyelitis and diskitis. Two important etiologies are involved in the pathogenesis of spondylodiscitis: Mycobacterium tuberculosis (TB-S) and pyogenic bacteria.
such as Staphylococcus aureus (NTB-S). Diagnosis and treatment of spondylodiscitis are constantly delayed because the symptomatology is non-specific. There are controversial opinions regarding the optimal antimicrobial therapy duration. Aims: To overview the diagnosis and therapeutic difficulties in patients with spondylodiscitis.

Methods: We made a retrospective analysis of the patients with spondylodiscitis monitored in the Third Department of the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” between 2004 and 2014. Epidemiological, clinical, imagistic and therapeutic data were evaluated.

Results: Forty-three patients were analyzed with a mean age of 58.02 years old and a sex ratio MF=1.62:1. The etiology analysis showed: 10 patients with TB-S (23.25%) and 32 with NTB-S (14 with unknown etiology, 15 with S. aureus, 2 with E. coli and 1 with Enterococcus faecalis). The main location of spondylodiscitis was the lumbar spine (69.76%) followed by thoracic (23.25%) and cervical spine (4.65%).

The etiological diagnosis of NTB-S was made by blood culture – 13 patients (30.2%), culture from vertebral abscess – 4 patients (9.3%) and from soft tissue infection – 1 patient. TB-S was confirmed by: lesion biopsy – 8 patients, PCR for Mycobacterium tuberculosis from the CSF (1 patient who associated tuberculous meningitis) and MRI (1 patient with multiple tuberculomas). In TB-S patients, MRI showed a lack of disc involvement, but large paraspinal extension. In NTB-S, MRI showed important vertebral destruction. 23 patients had paravertebral abscesses (9 with TB-S and 14 with NTB-S). The primary infectious focus was: vertebral – 34.88% (6 patients with TB-S without pulmonary tuberculosis and 9 patients after neurosurgery for spinal disc herniation), skin and soft tissue infection – 11.62%, endocarditis – 1 patient, diverticulitis – 1 patient, urinary tract infection – 2 patients and unknown - 37.2%. The mean duration of NTB-S antimicrobial therapy was 4.74 months (between one month for patients who had neurosurgical therapy and 20 months for a patient with extensive lesions who did not benefit by neurosurgery). The access to neurosurgery was limited: only 11 patients were operated – 6 with TB-S and 5 with NTB-S.

Conclusion: A limited number of patients have access to neurosurgery in Romania and as a consequence, a prolonged antimicrobial therapy is necessary. In the current context when Clostridium difficile infection represents a threat, it is important to make a major change in the management of spondylodiscitis.

## SESSION: EMERGING INFECTIOUS DISEASES

### O23

**Inter-disciplinary approaches for the infectious diseases pathology**

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**Background:** In order to elucidate the diagnosis and the correct therapeutic approaches, the present high degree of specialization, as well as the complex, frequent “borderline” pathology, impose an inter-disciplinary cooperation. We presented the main infections that imposed an inter-disciplinary cooperation; we enumerate main imposed problems, as well as a unitary vision for these approaches.

**Methods:** We sorted out the cases that necessitated at least two admissions in different specialty wards, compulsory, one of them being the Central University Emergency Military Hospital Dr Carol Davila Infectious Diseases Ward, for diagnosis, therapy and follow-up.

**Results:** The most frequent inter-disciplinary approaches were: infections in immunosuppressed patients (HIV/AIDS, tumors, immune-suppressive therapies) with oncology and hematology; infectious endocarditis with cardiology and cardio-surgery; hydatid diseases with general surgery; infections in drug abusers with psychiatry; neurological pathology (e.g. neuroborreliosis) with neurology. In order to sustain the diagnosis, we used the hospitals’ exploring facilities, as well as national and international reference laboratories.

### O24

**Clinical and microbiological characterization of Clostridium difficile infection in Romania (2013-2014): a hospital-based study**

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**Background:** Since 2011 Clostridium difficile infection (CDI) has been an emerging nosocomial problem in Romanian hospitals, due to its growing incidence and severity. Objectives: To describe risk factors and clinical outcome for CDI cases, and strains characterization.

**Methods:** We collected data for all 398 confirmed or probable cases of CDI admitted during 15 November 2013-28 February 2014 in 11 hospitals: 5 from Bucharest, and 7 from Cluj, Iași, Timișoara, Târgu Mureș and Brașov. PCR ribotyping was performed at Cantacuzino Institute and E-test (for moxifloxacin and metronidazole) and binary toxin gene identification (PCR) were performed at Matei Balș Institute. The hospitals sent a maximum 20 feces samples for each test.

**Results:** Mean age was 63.4 years (range 1-94 years), and sex ratio F: M=1:0.81. For 40 patients, CDI were community-acquired, 12.5% CDI5 (9.3%-16.6%), if indeterminate or origin cases were excluded; 12 of 13 strains tested from these patients were rbox27 and/or binary toxin positive. A post-antibiotic CDI were documented in 346/385 analyzeable cases, 89.9% CDI5 (86.5%-92.5%). 53.6% of them received medication from at least two different antibiotic groups. The most utilized antibiotics were cefepime and quinolones. In 13.1% cases with known history, the CDI episode was a recurrent one CDI5 (10.1%-17%); binary toxin was retrieved in all six tested strains from recurrent CDI. A number of 45 episodes were considered severe CDI (25 deaths, 7 intensive care required, 6 colectomies, 7 patients discharged with worsened condition, 12.1% from 371 episodes with identified outcome CDI5 (9.2%-15.8%). From 155 tested strains, 122 belonged to rbox27 and/or were binary toxin positive, 78.7% CDI5 (71.6%-84.4%); the remaining 33 strains belonged to rbox02 (n=4), 014 (n=2), 018 (n=2), 087 (n=2), one isolate each 001, 011, 012, 017, 020, 106 rboxtypes and 17 strains were binary toxin negatives. The 027 rboxtype and/or binary toxin presence were prevalent in all hospitals, ranging from 69.7% to 100%. In 62 of 84 tested isolates, the MIC for moxifloxacin was greater than 2 mg/L, the epidemiological cut-off value, more frequent in rbox27 or binary toxin positive strains, RR=2.02 (1.27; 3.22), p<0.0001.

**Conclusion:** The severe inter-disciplinary approaches were the success key for diagnosing and treating patients, being a necessary tradition, due to the complexity of cases. We proposed optimal ways of collaboration, sometimes successfully, but institutionalized approaches protocols were needed.
Background: Clostridium difficile infection (CDI) is an increasingly common hospital-associated infection. There is an increasing awareness in recent years about the impact of community-acquired Clostridium difficile infection (CA-CDI).

Methods: We enrolled all CDI patients admitted to the Adults III department of the National Institute for Infectious Diseases "Prof. Dr. Matei Balș", Bucharest, between January – July 2014. Stool culture, toxin ELA and Cepheid Gene Xpert C. difficile test were used for CDI diagnosis. The subjects were divided into two groups: CA-CDI patients (Group 1) and HA-CDI patients (Group 2). Our objective was to describe the clinical, epidemiologic features and outcome of CA-CDI compared to hospital-associated CDIs (HA-CDI) including the ATLAS bedside severity scoring system. Statistical analyses were performed using SPSS Statistics package v.17.

Results: We included 57 patients with median age 69 years (IQR = 54.78). Male/female ratio was 0.72. Most patients (73.4%) presented with an initial CDI episode, the rest having the first (17.5%) or next (2-5) (7%) recurrences. The median value of ATLAS score was 3 (IQR=2.4). Most patients (87.7%) had previously received antibiotic therapy. In 15.8% cases cancer had been previously diagnosed and 17.5% of patients had had recent surgery. Clostridium difficile 027 strain was identified in almost all patients. The patients were treated with vancomycin (73.7%), metronidazole (12.3%), vancomycin/metronidazole association (10.3%); 3.5% received tigecycline. Nine patients (15.8%) were included in the CA-CDI and forty-eight patients (84.2%) had HA-CDI. The number of CA-CDI in the first 7 months of 2014 was about two times higher than in 2013. Group 1 had fewer comorbidities, were younger (median 52 years (IQR 34.5;77) vs. 69.50 years (IQR 55.25;78), p=0.164, had more mild CDI episode (53.6% vs. 33.3%, p=0.06), all had received antibiotics and two cases received proton pump inhibitors.

Group 1 received more aminopenicillins (33.3%) and less CEPH (11.1%) compared to Group 2 (2.1% and 18.8%, respectively, p=0.06 and p=1). FQ use was similar: 22.2% in Group 1 vs. 18.8% in Group 2. There was one death in HA-CDI. There were no statistical differences between the two groups regarding: sex distribution, median ATLAS score – 3, rates of complicated/recurrent CDI and use of vancomycin or metronidazole treatment.

Conclusion: Approximately one sixth of CDIs were CA-CDI. These patients were younger, had predominant mild CDI and received more frequently aminopenicillins than those with HA-CDI. We found no significant differences between the two groups regarding Clostridium difficile 027 strain prevalence and infection severity.

Results: The age of the patients ranged between 18 and over 91 years, 72.64% were over 60 years old and 16.98% over 80. 78.30% of the patients had had previous recent hospitalization in medical or surgical units. A percentage of 81.13% of patients reported previous use of antibiotics (in hospital but also in community, especially fluoroquinolones and cephalosporins). We found severe clinical forms in 20.75% of cases; relapses were shown in 16.98% of the patients and the frequency of deaths was 4.72%. The most important laboratory disturbances were: leukocytosis in 53.92% cases (14.71% over 20,000 WBC/cmm), high level of serum creatinine in 41.41% patients (over 3mg% in 7.07% patients) and hypoproteinaemia in 77.27% cases (11.36% cases under 4.5mg%).

Conclusion: Patients admitted with Clostridium difficile colitis were elderly in most cases, requiring more complex care tailored to specific age and age-related pathology.

2. Increased frequency of hospitalizations and use of antibiotics were observed in the recent medical history of the patients.

3. Severe forms of the disease and relapses were frequent, a fact that led to an increased hospitalization period.

4. A documented and argued choice of the antibiotics therapy for different diseases is necessary in patients who have risk factors for the occurrence of Clostridium difficile colitis, avoiding the frequent use of fluoroquinolones and cephalosporins.

O26 Epidemiological and clinical considerations on Clostridium difficile colitis in Brașov County

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BMC Infectious Diseases 2014, 14(Suppl 7):O26

Background: Clostridium difficile is currently the most frequent cause of nosocomial diarrhea but also cause of disease in the community, antibiotic therapy and hospitalizations related; advanced age (over 60 years), malignancies, chronic kidney disease are also risk factors for infection with Clostridium difficile. The incidence of Clostridium difficile increases all over the world. The complications of the disease can be severe (fulminant colitis, toxic mega colon, colonic perforation, sepsis), with need for admission to intensive care unit and risk of death. The aim of this study was to analyze some epidemiological and clinical aspects on colitis with Clostridium difficile in patients admitted into the Infectious Diseases Hospital of Brașov.

Methods: It is a retrospective study, on 106 cases with Clostridium difficile infection, admitted in the Infectious Diseases Hospital of Brașov during November 2012 – April 2014. We analyzed: age of patients, previous hospitalizations, recent use of antibiotics, clinical forms of the disease, laboratory disturbances, frequency of relapses and deaths.

Results: The age of the patients ranged between 18 and over 91 years, 72.64% were over 60 years old and 16.98% over 80. 78.30% of the patients had had previous recent hospitalization in medical or surgical units. A percentage of 81.13% of patients reported previous use of antibiotics (in hospital but also in community, especially fluoroquinolones and cephalosporins). We found severe clinical forms in 20.75% of cases; relapses were shown in 16.98% of the patients and the frequency of deaths was 4.72%. The most important laboratory disturbances were: leukocytosis in 53.92% cases (14.71% over 20,000 WBC/cmm), high level of serum creatinine in 41.41% patients (over 3mg% in 7.07% patients) and hypoproteinaemia in 77.27% cases (11.36% cases under 4.5mg%).

Conclusion: Patients admitted with Clostridium difficile colitis were elderly in most cases, requiring more complex care tailored to specific age and age-related pathology.

2. Increased frequency of hospitalizations and use of antibiotics were observed in the recent medical history of the patients.

3. Severe forms of the disease and relapses were frequent, a fact that led to an increased hospitalization period.

4. A documented and argued choice of the antibiotics therapy for different diseases is necessary in patients who have risk factors for the occurrence of Clostridium difficile colitis, avoiding the frequent use of fluoroquinolones and cephalosporins.

O27 Etiology of acute diarrhea in patients requiring hospitalization in Clinical Infectio...
**O28**

The seroprevalence of hepatitis E virus infection in the preselected population from Romania: a hospital survey

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BMC Infectious Diseases 2014, 14(Suppl 7):O28

**Background:** Hepatitis E virus (HEV) infection is a significant public health problem in many parts of the world. The virus is classified into four major genotypes, representing a single serotype. HEV genotypes 1 and 2 are restricted to humans and usually transmitted via fecally-contaminated water, resulting in large outbreaks and epidemics of acute hepatitis in developing countries. HEV genotypes 3 and 4 can infect humans as well as other mammalian species (e.g. pigs) and associate sporadic cases of autochthonous hepatitis E, recently described in developed countries. In these areas, zoonotic transmission appears to play a major role. Moreover, genotype 3 HEV infection can cause chronic hepatitis in immunosuppressed patients. The estimated seroprevalence of HEV infection in these regions is variable, between less than 5% and 52% in southwestern France. To date, no HEV seroprevalence studies have been performed in Romania.

**Study hypothesis:** The specific aim of this observational, cross-sectional study is to estimate the prevalence of serum anti-HEV IgG antibodies in the Romanian population. The study population will include 1000 consecutive patients admitted in two medical centers from Bucharest over a period of one year: 900 patients in the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” and 100 female patients in the Department of Gynecology of the University Emergency Hospital, Bucharest.

**Conclusion:** The discovery of autochthonous cases of hepatitis E in Romania: a hospital survey- to 2013, in order to establish the first-line therapy for critical patients with nosocomial infections.

**Methods:** We collected the data related to hospital service units where nosocomial infections had been identified, the etiologic agents that were identified, the site of infection and the antibiotic sensitivity rates of nosocomial infections.

**Results:** The total number of isolated strains was 413, 231 in 2012 and 182 in 2013. In the intensive care units 151 nosocomial infections were identified; 88 strains in the Surgical Department, 27 strains in the Department of Neurosurgery and 23 in the Orthopedic Department. 19 strains were identified in the Neurology Department and also in the Internal Medicine Department, 17 strains were identified in the Urology Department, 14 in the Aesthetic Surgery Department, 8 in the Nephrology Department, 8 in the Hematology Department and 5 in the Gastroenterology Department. 3 strains were isolated in each of the following departments: Diabetes and Nutrition Diseases, ENT and Neonatology and 1 strain was identified in the Cardiology Department. In terms of etiology, the most commonly isolated were: Enterobacter spp. (111) followed by Acinetobacter spp. (71), Staphylococcus aureus (46), Klebsiella spp. (30), Enterococcus spp. (20), Pseudomonas spp. (19), Proteus spp. (19), fungi (17), coagulase-negative Staphylococcus (11), Burkholderia cepacia (8), and Serratia marcescens (5).

**Conclusion:** Most cases of nosocomial infections were reported from ICUs and surgery, representing surgical wound infections and nosocomial pneumonia. In aspiration pneumonia patients, Acinetobacter spp. (22) was isolated the most frequently. In blood cultures the most frequently isolated strains were Klebsiella pneunomiae and Staphylococcus aureus. Burkholderia cepacia was associated with hematologic malignancies. Enterobacter spp. was the most common etiologic agent isolated from surgical wound infections and from nosocomial urinary tract infections. The use of broad-spectrum antibiotics was associated with the emergence of carbapenemase in over 90% of the isolated strains of Acinetobacter spp. and Enterobacter Ampc (+), in 54.05% of Enterobacter extended-spectrum beta-lactamase (ESBL +), in 20.34% of the Escherichia coli ESBL + isolated strains. Methicillin-resistant Staphylococcus aureus (MRSA) was isolated in 67.74% of all Staphylococcus aureus strains.

**O30**

Tuberculosis in children perinatally exposed to HIV in the current epidemiological TB context

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**Background:** Romania is among the top European countries from the European Union in terms of tuberculosis (TB) incidence. Children with perinatal HIV infection represent a special category due to the increasing and more frequent cases of pulmonary and extrapulmonary TB, delayed detection, disease severity, and last but not least the emergence of multidrug-resistant disease.

**Method:** During 01.01.2011 - 01.07.2014 in the Immunocompromised Children Department from the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” we analyzed the dynamical evolution of 214 perinatally HIV exposed children, aged 0-4 years. Lack of vaccination due to prematurity and the degree of immunosuppression in maternity contributed considerably to the increased incidence of TB in the family’s epidemiological context (at least one family member is diagnosed with tuberculosis). A troubling aspect is that these children come from families with resistant forms of tuberculosis (TB - MDR) due to their parents’ poor adherence to treatment, mainly those pertaining to the 1989-1993 HIV cohort in Romania.

**Results:** Of the total number of exposed children 9.81% were diagnosed with tuberculosi of which 14% in apparent primary TB, 71.4% primary TB, 9.52% secondary TB (i.e. 4.76% with abdominal

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**O29**

Some epidemiological aspects of nosocomial infections. Antibiotic sensitivity rates of isolated bacteria from nosocomial infections - A prospective study from 2012 to 2013 in the Academic Emergency Hospital Sibiu, Romania

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**Background:** The aim of this study was to monitor the nosocomial infections in our hospital (The Academic Emergency Hospital in Sibiu), to monitor the antibiotic sensitivity patterns of isolated bacteria from nosocomial infections and to follow the variation in resistance from 2012 to 2013, in order to establish the first-line therapy for critical patients with nosocomial infections.

**Methods:** We collected the data related to hospital service units where nosocomial infections had been identified, the etiologic agents that were identified, the site of infection and the antibiotic sensitivity rates of nosocomial infections.

**Results:** The total number of isolated strains was 413, 231 in 2012 and 182 in 2013. In the intensive care units 151 nosocomial infections were identified; 88 strains in the Surgical Department, 27 strains in the Department of Neurosurgery and 23 in the Orthopedic Department. 19 strains were identified in the Neurology Department and also in the Internal Medicine Department, 17 strains were identified in the Urology Department, 14 in the Aesthetic Surgery Department, 8 in the Nephrology Department, 8 in the Hematology Department and 5 in the Gastroenterology Department. 3 strains were isolated in each of the following departments: Diabetes and Nutrition Diseases, ENT and Neonatology and 1 strain was identified in the Cardiology Department. In terms of etiology, the most commonly isolated were: Enterobacter spp. (111) followed by Acinetobacter spp. (71), Staphylococcus aureus (46), Klebsiella spp. (30), Enterococcus spp. (20), Pseudomonas spp. (19), Proteus spp. (19), fungi (17), coagulase-negative Staphylococcus (11), Burkholderia cepacia (8), and Serratia marcescens (5).

**Conclusion:** Most cases of nosocomial infections were reported from ICUs and surgery, representing surgical wound infections and nosocomial pneumonia. In aspiration pneumonia patients, Acinetobacter spp. (22) was isolated the most frequently. In blood cultures the most frequently isolated strains were Klebsiella pneunomiae and Staphylococcus aureus. Burkholderia cepacia was associated with hematologic malignancies. Enterobacter spp. was the most common etiologic agent isolated from surgical wound infections and from nosocomial urinary tract infections. The use of broad-spectrum antibiotics was associated with the emergence of carbapenemase in over 90% of the isolated strains of Acinetobacter spp. and Enterobacter Ampc (+), in 54.05% of Enterobacter extended-spectrum beta-lactamase (ESBL +), in 20.34% of the Escherichia coli ESBL + isolated strains. Methicillin-resistant Staphylococcus aureus (MRSA) was isolated in 67.74% of all Staphylococcus aureus strains.
determination, 4.76% marrow). All children were diagnosed positive following the TB family epidemiological investigation. Of the 214 assessed cases, only 3.27% represented contacted TB who received prophylactic tuberculosis.

Conclusion: The increased incidence of tuberculosis in the general population, particularly in children from mothers with HIV lead to significant percentages and treatment-resistant forms of the disease. Furthermore this makes it difficult for TB to be eradicated which renders it an important public health issue in Romania.

SESSION: STATE-OF-THE-ART IN INFECTIOUS DISEASES

O31 The continuous race of therapy optimization in sepsis control
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Background: Statistical data resulted from the analysis of the cases diagnosed and treated in the ICU of INBI Matei Balș in the last 5 years. The continuous escalation of the technical means of advanced life support associated to the antibacterial and antifungal therapy required by the proven or presumed etiology.

Methods: We analyzed risk factors, comorbidities, previous maintenance treatment schemes, a complete picture of maximal complexity which requires interdisciplinary teams.

Results: Statistical analysis of the data from the last 10 months showed a total of 186 cases of sepsis, out of which 86 cases of severe sepsis and septic shock with a very high rate of mortality (76 patients). Risk factors and comorbidities (a high rate of obesity, cardiac diseases, diabetes and immunodeficiency, elderly patients (63.6 years old), and so on) with etiology ranging from MRGN (Pseudomonas, A. baumannii, K. pneumoniae, Enterobacter spp) to gram positive cocci, C. difficile, fungal infections, and various viral infections (Influenza v., Parainfluenza, Enteroviruses and even Hantavirus) could explain the difficulties in the management of critically ill patients.

Conclusion: The comparative analysis with the previous years highlights the difficulties in the strategy of patient care in the ICU. Under the prescribed medication schemes there were both successes and failures, often due to the antibiotic resistance profile. The ICU cases are more and more complex, requiring the continuous optimization of the therapy schemes, advanced ICU technology, and the presence of a permanent multidisciplinary team, in the hope of achieving a better severe sepsis control.

O32 The experience of the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” in bacterial resettlement therapy trough fecal microbiota transplant in recurrent infections with C. difficile
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BMC Infectious Diseases 2014, 14(Suppl 7):O32

Background: The increasing frequency of C. difficile infections and the increased frequency of relapses imposed implementation of new treatment alternatives.

Methods: Starting with July 2013, in the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” we performed 32 therapies in patients with relapsing infections trough bacterial re-colonization.

Results: We used as donors blood relatives (children, grandchildren) in 68.8% and in 31.2% cases we used stools from others. The success rate at 90 days was 96.8%. This success rate was achieved with a single procedure in 74.1% of cases, with two procedures in 22.5% and in 3.2% of cases with three procedures. The success rate was significantly higher in the first group.

Conclusion: Although the success of this maneuver is significantly higher than the standard antibiotic treatment, there is need to deepen the experience before generalizing it.

O33 Establishing the epidemiology of respiratory viral infections using “A NOVEL POINT-OF-CARE MULTIANALYTE ANTIGEN DETECTION TEST mariPOC” during the season 2013-2014
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BMC Infectious Diseases 2014, 14(Suppl 7):O33

Background: Rapid etiological diagnosis has a very important role in the clinical management of respiratory viral infections. Using a multianalyte point-of-care detection system, based on a fully automated immunoassay method, we can detect respiratory viruses (influenza A and B viruses, parainfluenza 1, 2 and 3 viruses, respiratory syncytial virus, human metapneumovirus and adenovirus) and the presence of Streptococcus pneumoniae from a single nasopharyngeal swab or aspirate. Objectives: To evaluate the incidence of respiratory viral infections in the pediatric department of the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” during 1 November 2013 – 1 June 2014.

Methods: The collected samples from children with respiratory tract symptoms were analyzed by mariPOC (the novel multianalyte point-of-care antigen detection test). Positive samples were then studied in terms of clinical manifestations, complications, signs of bacterial co-infection, antiviral and antibiotic administration and days of hospitalization.

Results: We tested approximately 600 samples, out of which 50% were positive for at least one virus. The most frequent infection was influenza A, which accounted for 55% of the positive samples. Other frequent viruses found were respiratory syncytial virus in 27% of cases, human meta-pneumovirus in 6.2%. We found viral co-infections in 8.9% of cases, out of which the most frequent association was influenza A virus with respiratory syncytial virus.

Conclusion: The mariPOC antigen detection test provides a very useful and rapid pathogen specific diagnosis of respiratory infections, having a high specificity for the most important viruses. Using this method we found that influenza A virus was the most frequent viral infection in children during 2013-2014 winter-spring season, but also that viral co-infections are an important etiology of respiratory symptoms in children.

O34 Clinical utility of the GeneXpert assay for the diagnosis of Clostridium difficile infections
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BMC Infectious Diseases 2014, 14(Suppl 7):O34

Background: Since 2011 a rapid increase of cases with Clostridium difficile infection (CDI) was observed in the National Institute for Infectious Diseases (NIID), the largest tertiary level infectious diseases hospital in Romania. The need of a fast and accurate diagnosis of CDI and the low sensitivity of the available rapid immunoassays supported the introduction of a molecular assay as a part of the CDI diagnostic strategy. The present study aimed to evaluate the clinical utility of the GeneXpert Clostridium difficile (Cepheid, Sunnyvale, CA) assay in the diagnosis of CDI cases in NIID.

Methods: Retrospective study of the CDI cases admitted or presented at NIID between January 2013 and August 2014. We used the medical records to analyze the demographic and medical data of each patient; the positivity rate and the time to result for the GeneXpert assay and for the standard solid medium anaerobic cultivation.

Results: A number of 1454 samples from 1289 patients were tested with GeneXpert in the last 19 months. The mean age in the studied group was 59 years (0-95 years) and the male/female ratio was 1:1.32. Approximately half (49.2%) of the samples tested with the molecular assay were positive for toxigenic C. difficile. A presumptive identification of C. difficile ribotype 027 was done in most (80.8%) of the positive samples. Due to its sample based
format the molecular assay had a much shorter time to result than the standard culture tests (2.47 hours versus 3.86 days).

**Conclusion:** Sample based molecular assays are an important tool in the management of CDI, providing valuable information for timely treatment decisions and for appropriate institutional infection control procedures.

**O35**

**Sonication – further progress in the microbiological diagnosis in implant-associated infections**

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**Background:** Although recommended, sonication is not yet a routinely used technique in the diagnosis of implant-related infections worldwide. So far, this laboratory technique is performed in Romania in the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” since 2012.

**Methods:** We evaluated the medical implants received between July 2012 and July 2014. The explanted implants were sonicated using BactoSonic ultrasonic bath (Bandelin, Germany) and the resulting sonication fluid was cultured according to the Trampuz method (NEJM 2007). Microbial identification and antibiotic susceptibility testing was performed using Vitek 2 Compact (BioMerieux, France).

**Results:** We sonicated 58 medical implants as follows: 39 orthopedic implants (21 hip prostheses, 11 knee prostheses and 7 fixation devices), 9 breast implants and 10 other devices (e.g. central venous catheter, drainage tube). We identified a good correlation (93.75%) between sonication culture and standard culture tests (2.47 hours versus 3.86 days).

**Conclusion:** The molecular assay had a much shorter time to result than the standard culture tests (2.47 hours versus 3.86 days).

**O37**

**Possibilities, limits and particularities of plastic surgery treatment in HIV-associated lipodystrophy**

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**Background:** Given the particularities of the Romanian HIV cohort, an important number of patients have received treatment with first-generation antiretroviral drugs and have developed an associated lipodystrophy. Nowadays HIV-infected patients can benefit from less invasive surgical treatments for lipodystrophy, to ameliorate their psychosomatic status.

**Case report:** We present 2 cases of patients with HIV-associated lipodystrophy. These patients underwent specific modern “closed” plastic surgery corrections: liposuction and lipo-redistribution. The patients were evaluated with a follow-up of 10 years (the first case) and respectively 6 months (the second case). In each case the possibilities and limits of these treatments were evaluated.

**Conclusion:** Treatment of HIV infection should be effective but it should also lead to an improvement in the quality of life. A multidisciplinary approach – infectious diseases physicians, plastic surgeons, anesthesiologists, histopathologists, psychologists etc. – can contribute to a psychosomatic improvement.
Background: Kaposi’s sarcoma (KS) is a tumor derived from the endothelial cell lineage caused by Kaposi sarcoma-associated virus (KSHV), also known as human herpes virus 8 (HHV-8). Four subtypes of KS have been described: classical KS, African endemic KS, immunosuppression-associated KS and AIDS-associated KS. Over 95% of the lesions have been found to be infected with HHV-8, regardless of the clinical subtype. Classical KS usually occurs in elderly men from the Mediterranean region. It is a chronic, slowly progressing disorder, usually confined to the skin, which only rarely affects other organs.

Case report: We report the case of a 56-year-old male patient who addressed to our clinic presenting extensive violaceous plaques comprising both feet and lower half of the calves, the right hand, the dorsum of the left hand, as well as smaller lesions located on the lower and upper extremities and the torso. Several violaceous firm nodules of various diameters were scattered on the surface of the plaques. The lesions were associated with extensive oedema and therefore the functionality of the right hand was severely impaired and the patient had walking difficulties. The patient asserts that the lesions had first occurred two years prior to the presentation on the lower extremities and rapidly enlarged. He was diagnosed with lichen planus and was treated with topical and systemic glucocorticoids, which helped reduce the oedema but had little effect on the cutaneous lesions. When the systemic glucocorticoid treatment was ceased, the oedema rapidly recurred.

The HIV testing turned out negative. Laboratory findings were within normal range. A biopsy was taken from one of the lesions and the clinical suspicion of Kaposi’s sarcoma was confirmed. The patient was treated with radiotherapy and the oedema rapidly reduced, the patient regaining the functionality of his hands and feet.

Conclusion: The classical form of Kaposi’s sarcoma is usually a chronic, indolent disorder, slowly progressing over a period of several years or decades. The particularity of the case is the rapid progression in an otherwise healthy patient.

Consent: Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

P2
A complicated case of osteodiscitis and retroperitoneal abscesses in an immunosuppressed patient
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Background: Frequent pathogens responsible for osteodiscitis include Staphylococcus aureus, enteric Gram-negative bacilli and Mycobacterium tuberculosis.

Case report: A 59 year-old female with type-2 insulin-dependent diabetes presented to our clinic in June 2014 for fever, productive cough and left chest pain. On admission, the clinical exam revealed lower left lung absent breath sounds, right mastectomy and intensely impaired mobility. The laboratory reports showed leukocytosis and thrombocytosis. The CT scan and the thoracolumbar spine MRI exam described T12-L2 osteodiscitis with osteodiscal abscess, two massive right and left retroperitoneal abscesses close to both ureters, and left pleural effusion as an extension of the left abscess.

Her medical history revealed that in June 2013 she had suffered a traumatic comminuted L1 fracture, with long-term lumbar pain that progressed to left hip and thigh pain. She also had a history of surgery and radio-chemotherapy for breast cancer in 2011. As the pathogenic agent had not been isolated yet, the patient was started on etaropenem, linezolid and anti-tuberculosis (antiTB) therapy. She was transferred to neurosurgery, where a T12 hemilaminectomy was performed, leading to improved mobility. Cultures identified Serratia marcescens, and smears showed frequent polymorphonuclear cells; therapy was changed to tigecycline, and antiTB treatment was stopped.

As the size of abscesses increased on serial ultrasound scans 2 weeks apart, the patient was transferred to urology, where the abscesses were drained and a drainage tube was placed. The abscess cultures came back negative, but the smear showed frequent polymorphonuclear cells. The patient was switched to oral ciprofloxacin and rifampin, with clinically favorable evolution. After 2 weeks of oral therapy she displayed no leukocytosis, no biological inflammatory syndrome and an ultrasound exam showed partially drained abscesses. We performed smears and cultures from the drainage tube fluid, for all suspected pathogens, including Mycobacterium tuberculosis. The smears showed Gram-positive cocci and 15% polymorphonuclear cells and 45% lymphocytes. The Zielh-Neelsen stain was negative. All cultures are still in progress. The patient is scheduled for urologic evaluation and a CT scan, to decide whether open surgery is required.

Conclusion: Serratia marcescens can be considered as pathogenic agent in immunosuppressed patients. However, M. tuberculosis cannot be ruled out in this case, given the insidious evolution and the size of abscesses, particularly as the patient displayed favorable evolution under ciprofloxacin and rifampin. In difficult to treat cases, antimicrobial treatment may become limited and a multidisciplinary approach is needed to ensure the best management.

Consent: Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

P3
A rapid progressive and fatal case of Non-Hodgkin’s lymphoma in a newly diagnosed HIV patient
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Background: Non-Hodgkin’s lymphoma (NHL) is one of the frequent and severe oncologic pathologies associated with HIV infection. Unlike in immunocompetent patients, this pathology manifests more aggressively in HIV-positive patients, frequently with severe systemic extranodal involvement, affecting the gastrointestinal tract, liver, bone marrow, central nervous system (CNS). Along extranodal involvement, the low level of CD4 at diagnosis, previous history of AIDS-defining illness, the NHL advanced stage, high LDH level and advanced age, are unfavorable prognostic factors for NHL associated with HIV infection.

Case report: We present the case of a 27-year-old patient, admitted to INBI “Prof. Dr. Matei Balș” with axillary tumoral mass with rapid growth in size within past two months, back pain that irradiated towards the lower limbs, abdominal pain, diplopia. The patient was initially hospitalized in a surgical oncology clinic where a biopsy from the tumoral mass was performed and the pathological aspect revealed granulomatous lymphadenitis. In our clinic we confirmed the presence of HIV infection, with a value of CD4 T lymphocytes of 442/mm³. On the 6th day of hospitalization, the patient developed fever. Because of the previous histopathology exam and before we elucidated the diagnosis, different causes of febrile syndrome and enlarged lymph nodes were taken into account: tuberculosis, fungal infection, for which the appropriate therapy was instituted. At the same time, during the two weeks of admission we performed lymph node and bone marrow biopsy that confirmed the diagnosis of NHL stage IV with middle B-cell. Imaging studies (brain MRI, chest CT, abdominal ultrasound) certified the presence of brain, liver, intrathoracic and paravertebral involvement. The patient was promptly started on HAART and he was referred to the hematology clinic for NHL treatment. At 24 hours after the transfer, the patient died.
Conclusion: Our case illustrates the evolution of an aggressive NHL in a young patient, recently diagnosed with HIV infection, with a good immune status, which is inconsistent with classical prognostic factors. In addition, due to multisystem involvement of NHL frequently encountered in these patients, the differential diagnosis can be extensive and a positive diagnosis represents an emergency and is essentially established through histopathology. This involves a close and effective interdisciplinary collaboration.

Consent: Written informed consent was obtained from the patient's next of kin for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

P4
A retrospective study concerning specific therapy and evolution of invasive fungal infections diagnosed in the National Institute for Infectious Diseases "Prof. Dr. Matei Balș"
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Background: Invasive fungal infections still have high morbidity and mortality rates, especially in immunocompromised patients, given the lack of specific symptomatology and of fast and early diagnosis methods.

Methods: We present a retrospective study performed between January 2011 – June 2014 in the National Institute of Infectious Diseases "Prof. Dr. Matei Balș", including patients with invasive fungal infections and complete clinical and biological data.

Results: 18 patients met the inclusion criteria for the studied period, representing 40% of the patients with potentially invasive fungal infections. The majority of patients were male, and the average age was 44 years. Only 2 of the patients apparently were not immunocompromised, the other 16 presenting HIV infection or fungal infections risk factors. The fungal species identified were Cryptococcus neoformans in 8 cases (40%) and Candida spp in 12 cases (60%), out of which 75% consisted of non-albicans species. The invasive fungi were isolated from blood cultures in 9 cases (52.4%), cerebrospinal fluid in 8 cases (38.1%), tips of central venous catheters in one case and from other pathological products in one case. The average period from admission to identification was 9.6 days. The antifungal susceptibility test indicated that 16 out of the 20 cases (80%) were sensitive to fluconazole and only 20% were dose-dependent sensitivity types. The patients were treated mainly using monotherapy – 1 antifungal in 10 cases (55%). Fluconazole was the most used agent, in 14 cases (77.8%) followed by voriconazole in 7 cases and posaconazole in 4 cases. The average treatment duration was 37.7 days, the shortest being one day, and the longest 120 days. 6 out of 18 patients (33.3%) deceased: one patient presenting severe bacterial infection treated with prolonged anticoagulation and 5 presenting C. neoformans meningitis associated with HIV infection.

Conclusion: Although proper treatment was administered, the mortality in invasive fungal infections remains high, given the fact that they generally appear in already marred or severely immunosuppressed patients.

P5
Acute hepatitis C – from the time of diagnosis up to six months of follow-up: a cohort retrospective study
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Background: Worldwide, the hepatitis C virus (HCV) infection is a common cause of chronic liver disease, but it is rarely diagnosed in the stage of acute hepatitis. Although hepatitis C was the most important hepatitis related to blood products transfusion, since 1992 the overall epidemiology of HCV infection has changed dramatically, many newly diagnosed cases of HCV infection related to the intravenous drugs use.

Methods: We conducted a cohort, retrospective study on all cases of acute hepatitis C admitted in the National Institute for Infectious Diseases "Prof. Dr. Matei Balș", Bucharest, over a period of about 5 years. We aimed to update, in our population, the epidemiological data, laboratory profile and natural evolution during six months after establishing the diagnosis of acute hepatitis C. We analyzed demographic data, risk factors for HCV infection and lab tests at diagnosis: the platelet count, prothrombin concentration (PC), transaminases, bilirubin level, titer of anti-HCV total antibodies and HCV viral load. Thereafter, we checked the serum HCV-RNA at 3 and 6 months, in order to estimate the rate of spontaneous viral clearance. Some follow-up missing data have been obtained through telephone interviewing of the patients.

Results: Between January 2010 and July 2014, we recorded a number of 31 patients. The median age of the patients was 45 years (IQR 37, 60) and 54.8% were male. In 2013 there was an increase in the number of diagnosed cases (n=9, 29%) compared to previous year (n=3, 9% in 2012). The main route of transmission of HCV infection was related to medical and surgical exposure in the past (n=17, 54.8%). Only 2 cases (6.4%) were related to intravenous drugs use. Most patients presented clinical jaundice at diagnosis (n=19, 61.2%). The median bilirubin level was 9.5 mg/dL. Most cases were mild hepatitis (n=29, 93%), with a median PC of 96%. In only a single case the PC was 26% from the beginning. Anti-HCV total antibodies were positive in 93.5% of patients; the median serum level was 10.3 IU/mL. The average value of HCV-RNA at diagnosis was 6.8 log10 IU/mL. The rate of spontaneous viral clearance at six months of follow-up was 50%.

Conclusion: Our study showed that, in cases of hospitalized acute hepatitis C, medical and surgical exposures were the major routes of HCV infection, anti-HCV serum antibodies were positive at the time of diagnosis in almost all cases and half of the patients achieved spontaneous viral clearance.

P6
Antibiotic treatment of Clostridium difficile infection in children – a challenge in pediatric practice
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Background: In the last decade the incidence of Clostridium difficile infection (CDI) in children is progressively increasing and the pediatricians are faced with difficulties in the therapeutic approach.

Methods: We performed a retrospective study that analyzed the antibiotic treatment in CDI from the experience of a Pediatric Gastroenterology Department – Grigore Alexandrescu Clinical Children’s Emergency Hospital, Bucharest. Cases were identified through enzyme immunoassays for A toxin or for A and B toxin of Clostridium difficile in the stool.

Results: Between January 1st 2005 and July 31st 2014, 52 patients were diagnosed with CDI. A large number of cases (61%) were diagnosed in the age group 1 to 4 years. The sex ratio was M/F = 0.9/1. 36% of patients had community-acquired CDI. In mild/moderate forms metronidazole was administered as a first-line treatment in 32 (61%) cases and proved efficient in 25/32 (78.1%) cases; vancomycin was used and was efficient in 18 cases. In severe forms (7.7%), the association of intravenous metronidazole and oral vancomycin was the option of choice and this approach cured all these cases. We report 11 patients with recurrent CDI (21%); in these cases oral vancomycin was efficient for the treatment of the recurrence. In 3 cases with a second recurrence rifaximin was the chosen therapy. Six out of 11 children with recurrent CDI had comorbidities (Hirschsprung disease, ulcerative colitis).
P7

Neuro-biological inferences into the depressive disorders of patients with chronic hepatitis C treated with interferon and ribavirin

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BMC Infectious Diseases 2014, 14(Suppl 7):P7

Background: This work is intended to establish a relation between two diseases, medical and psychiatric, both of them considered public health issues – chronic hepatitis C and depression. Interferon has been a great progress for the chronic hepatitis C patients’ therapy, but the treatment is encumbered by the occurrence of depression on 3-57% of patients. The purpose of this work is to assess the percent of the depressive disorders on chronic hepatitis C patients treated with interferon and ribavirin, as well as the monitoring of the related risk factors, upon depression occurrence and the evolution during anti-depressive treatment.

Methods: The retrospective study has been performed during the period of January 2011-January 2014 on a group of 64 patients with chronic hepatitis C, receiving combined anti-viral treatment (interferon and ribavirin), aged between 25-64 years, observing the criteria of inclusion into treatment. The moment of psychiatric examination request has been recorded, 3.1% needing psychiatric examination before starting the therapy, 28.1% having symptoms which occurred during treatment.

Results: The psychiatric examination has revealed as speeding causes of the depressive disorder the loss of social support for 39.5%, the biologic syndrome for 23%, and the loss of family support for 15.4%, and the depressive history for only 5.5%. The percent of the depressive patients after the starting moment of the anti-viral therapy has emphasized the occurrence of the depressive disorder on 83% of patients during the first 0-12 weeks. The maximum incidence of cases has been recorded on patients with ages between 20-45 years. The case distribution has been favorable to patients from urban area - 15 cases, versus 3 cases from rural area.

Conclusion: The anti-viral therapy for chronic hepatitis C has determined the occurrence of different levels of depression for 28.1% of the patients being studied. The anti-depressive treatment associated with the anti-viral one has been efficient, decreasing the abandon rate of the anti-viral therapy.

P8

Antiviral resistance in HCV strains isolated from Romanian patients with limited treatment options for chronic HCV infection

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Background: With the advent of direct-acting antivirals, the rate of sustained virologic response (SVR) after treatment for chronic HCV infection has dramatically increased [1]. However, recent data show that there is cause for concern regarding the potential emergence of viral resistance [2].

Methods: We performed a study to assess the antiviral resistance profile in a series of patients with limited treatment options for chronic HCV infection.

Results: We assessed data from 12 patients (gender ratio 1:1), of which 10 had HCV monoinfection and 2 had HCV+HIV coinfection. The mean age was 43.3±16.5 years (range 19-71 years). Eleven patients were infected with HCV genotype 1b, and one patient had been coinfected with genotype 2a/2c but had spontaneously cleared 2a infection and was now mono-infected with HCV 2c. Only one patient had IL28-B genotype CC, 4 patients CT and 5 patients TT (in two cases data on IL28-B were not available). Seven of the patients had received prior anti-HCV therapy: 2 with peg-interferon+ribavirin, 2 with faldaprevir-based regimens and 3 with telaprevir-based regimens. Of them, 3 had been non-responders and 4 had been relapsers. The mean plasma HCV-RNA was 6.1±0.7 log10 IU/mL. Patients were distributed over the whole range of fibrosis values on FibroMax, with a slight predominance of advanced fibrosis: F3 (2 patients) and F4 (3 patients).

Resistance to boceprevir or simprevir was identified in 3/12 cases (fold-change range: 4-24) and 2/12 cases (fold-change range: 32-38), respectively, although none of the patients had received prior therapy with these antivirals.

Resistance to telaprevir was identified in 3/12 cases (surprisingly, none of the cases with telaprevir therapy). Possible resistance was identified in another 6 cases (including cases treated with telaprevir and faldaprevir).

The overall fold-change range was 1.8-224.

Resistance to faldaprevir was identified in 3/12 cases (surprisingly, none of the cases with faldaprevir therapy), with a fold-change range of 1.2-360.0.

Conclusion: Cross-resistance to HCV protease inhibitors (PI) remains a cause for concern, particularly in patients with history of treatment with HCV PI-based regimens.

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Resistance of *Streptococcus pyogenes* to erythromycin was 8.95% compared with group G which had a resistance of 45.45%.

**P10**

Bi-compartmental evaluation of bacterial prints in infectious diseases – study hypothesis

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**Background:** PCR-based tools for detection of bacterial infections can considerably shorten the timespan from patient admission to initiation of targeted antibiotic therapy. As culture-based methods are operator-sensitive and yield lower rates of identification in longer timespans, dependent on species-specific growth rates, there is a need for new techniques leading to rapid identification of the pathogenic agent and its antimicrobial susceptibility profile.

PLEX-ID (Abbott Molecular Inc, Des Plaines, USA) ensures bacterial identification in a matter of hours, directly from clinical specimens, through PCR amplification and electrospray ionization-mass spectrometry.

**Study hypothesis:** Chronic bacterial infections have long been considered an important issue in clinical practice, particularly when foreign bodies promote biofilm formation. However, other mechanisms of bacterial latency such as phenotypic variants leading to persister cells have also been described [1], and are increasingly encountered in the clinic. Small colony variants or persister cells with low metabolic activity can associate significant delays in laboratory identification through culture-based techniques. Therefore, there is a stringent need for the implementation of novel identification methods.

We aim to perform a prospective study on bi-compartmental evaluation of bacterial prints in patients with infectious diseases, within the full range of Carmeli scores [2]. Serial samples will be collected from normally-sterile bodily compartments, at three different time-points: baseline (initiation of antimicrobial therapy), end-of-treatment, 3-week follow-up. PLEX-ID will be performed directly from the samples drawn at least two normally-sterile bodily compartments, depending on the primary site of infection. Where two normally-sterile or tissue samples are not available, blood samples will be used as control. The decline of bacterial load will be dynamically assessed through semi-quantitative methods and results will be interpreted based on clinical and paraclinical parameters. Small colony variants or persister cells with low metabolic activity have also been described [1], and are increasingly encountered in the clinic.

**Expected results:** We aim to define particular timelines of bacterial internalization or immune clearance and to pinpoint a critical interval when progression to persistent infection can occur, and when a clinical intervention would be able to stop and avert the chronicisation of bacterial infection.

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**References**


**P11**

Buschke-Löwenstein tumor of the vulva in a patient with a history of squamous cell carcinoma of the cervix

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**Background:** Buschke-Löwenstein tumor (BLT) is a very rare sexually-transmitted disease associated with human papillomavirus (HPV) type 6 and 11, but rare cases of oncogenic HPV types including HPV 16 and HPV 18 were also reported. It is characterized by slow, locally invasive growth and clinically presents as exophytic masses with a cauliflower-like morphology. It usually occurs in uncircumcised men and location in sites other than the penis is very rare. It is a premalignant disorder with a low incidence of metastasis but with a considerable risk of malignant transformation to squamous cell carcinoma (SCC).

**Case report:** We report the case of a 51-year-old female patient who addressed our clinic for a large, exophytic, cauliflower-like tumor involving the vulva and the perineum. The patient had been diagnosed with invasive SCC of the cervix 13 years before and had undergone intracavitary brachytherapy with Iridium-192 with a total dose of 60 Gy at point A, followed by total hysterectomy with bilateral salpingo-oophorectomy and lymphadenectomy. She showed no recurrences to this day. At the same time as the cervical SCC diagnosis the patient presented small, papular, erythematous lesions located on the vulva and had been diagnosed with condyloma acuminata. She underwent several conservative therapies including podophyllin, cryotherapy and electrocoagulation as well as debulking and surgical treatment with several relapses over the years. The patient had not used any treatment for three years before returning to our department, during which time the lesions had slowly grown reaching giant dimensions. Several biopsies were taken from the tumor and confirmed the clinical diagnosis of Buschke-Löwenstein tumor. The HIV testing turned out negative. The patient tested positive for HPV genotype 16. The other laboratory tests were within normal range.

**Conclusion:** Buschke-Löwenstein tumor can be associated with a high rate of recurrence and a risk of malignant transformation to invasive SCC, especially in patients with oncogenic types of HPV. The patient was sent to the general surgery department for excision and remains under the supervision of the dermatology and oncology department for rapid treatment of relapses and early detection of malignant transformation.

**Consent:** Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

**P12**

Case presentation: T9-T11 transverse myelitis with double viral etiology in an immunocompetent host

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**Background:** Transverse myelitis is a neurological disorder characterized by spinal cord inflammation, which can associate myelin damage, resulting in varying degrees of weakness, sensory alterations, and autonomic dysfunction. Some of the infectious etiologies include herpes viruses, influenza virus, echovirus, HIV, hepatitis A and rubella viruses.

**Case report:** We report the case of a 33-year-old woman who developed acute transverse myelitis with cerebrospinal fluid (CSF) findings suggestive for a central nervous system (CNS) infection with positive serology for acute herpes simplex virus-2 (HSV-2) infection and cytomegalovirus (CMV) DNA detection in CSF. This immunocompetent female patient presented with acute urine retention, complete absence of stool or gas and saddle paresthesia irradiated on the front of her lower limbs. Her spinal magnetic resonance imaging findings, CSF analysis and clinical picture were compatible with transverse myelitis. She also had skin rash resembling herpetic infection and her blood serology was positive for acute HSV-2 infection. She received treatment with IV acyclovir with partial resolution of the symptoms. Because of the persistence of symptoms for over 1 year and
the presence of CMV IgG (previously negative) we performed further investigation that revealed positive PCR for CMV from the CSF. We initiated treatment with ganciclovir IV with good clinical response. After more than 1 year from the first symptoms, the patient is still under close supervision of the neurologist and the infectious diseases doctor, with almost total recovery, accusing only mild paresthesia and weakness in the lower limbs during effort.

Conclusion: The isolation of CMV in the CSF suggests a direct viral toxicity implicated in the pathogenesis of transverse myelitis but we still have to take into consideration an immunological mechanism due to HSV-2 infection. This case highlights the fact that double viral etiology is very rare, but possible and that these viruses may cause serious infections even in an immunocompetent host.

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P13

Chances for cure in chronic HBV/HDV coinfection
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Background: Worldwide, chronic infection with HBV and HDV occurs in more than 10 million people with higher rates of developing cirrhosis, hepatic decompensation and hepatocellular carcinoma. Peginterferon (pegIFN) for 48 weeks is one of the current therapies, with poor response rates; prolonging therapy beyond 12 months might be of benefit for the patients.

In order to assess the response to a prolonged pegIFN therapy, we present 2 patients with chronic B/D coinfection, treated with pegIFN alpha 2a, 180 mcg weekly for 96 weeks and monitored, at least, every three months with a complete medical evaluation.

Case report: Patient 1: Female age 30, diagnosed at age 19 with chronic B/D coinfection; treated the first year with oral azathioprine for 12 weeks, then one week every three months; the second year she started interferon alpha 2a for 48 weeks, achieving biochemical and virologic response. At age 23, she became pregnant, gave birth to a healthy baby girl with no viral infection; after pregnancy, she had an ALT 10 times the upper normal limit, HBV-DNA 1,000,000 IU/mL. For two years, she received support therapy: ursodeoxycholic acid, vitamins, silymarin until we decided to start peginterferon alpha 2a 180 mcg weekly for 48 weeks. Well tolerated, we obtained undetectable HBsAg, HBV-DNA and HDV-RNA in the serum and normal ALT. For a sustained response, we decided to continue this treatment for another 48 weeks. Until present she maintained undetectable HBsAg, HBV-DNA and HDV-RNA; anti HBs < 2.00 (limits 2-10 IU/L), anti-HBe: 0.012 COI (reactive).

Patient 2: Male, 40 years old, diagnosed at age 36 with chronic B/D coinfection; we started standard peginterferon alpha 2a therapy for 48 weeks; with a major side-effect: Hashimoto thyroiditis in month 3, successfully resolved. We continued the treatment, then – also based on a second-opinion from a French hospital – we indicated another 48 weeks of treatment that resulted in sustained biochemical and virologic response with viral eradication, until present.

Conclusion: A long-term peginterferon therapy could be a chance for cure in patients coinfected with HBV/HDV, with permanent and rigorous monitoring and medical evaluation. This approach needs further studies, for the benefit of patients, considering the higher rates of mortality among them.

P14

Clinical and biochemical manifestation of acute viral hepatitis B in Republic of Moldova
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Background: Hepatitis B virus represents a pathology with a severe impact on public health. Worldwide, approximately 350 million individuals are chronically infected with hepatitis B virus (HBV). HBV is the leading cause of cirrhosis globally. Once chronic infection is established, approximately 30% of the patients will develop cirrhosis, and approximately one-quarter of patients with cirrhosis will develop decompensated liver disease within 5 years. Cirrhosis also substantially increases the risk for hepatocellular carcinoma (HCC).

Methods: In the study were included 73 patients with acute hepatitis B virus with a mean age of 33.20±1.46 years that were hospitalized in the Toma Ciobra Infectious Diseases Clinical Hospital. The analysis parameters: age, sex, onset, clinical manifestation, liver size, disease level, total bilirubin, ALAT, thymol test, prothrombin.

Results: Acute viral hepatitis B has been observed in the both sexes: women – 27 (37%), men – 46 (63%). The disease with the acute onset has been manifested in 73 patients (100%), more frequently in icteric form in 65 patients (89%), than in anicteric form in 8 patients (11%). In 1.4% of acute HBV patients it occurred in a milder form: in 65.8% – mild and in 32.8% – severe form. The preicteric period lasted 7.51±0.57 days. Acute B viral hepatitis includes asthenic, dyspeptic and mesenchymal inflammatory syndrome. Biochemical investigations: increased level of bilirubin 184.54±14.18 mmol/L, ALT constitutes 11.02±0.38 mmol/h/L, thymol test 11.29±0.74 U and prothrombin index – 70.99±1.51%. Hepatomegaly was 3.5±0.16 cm in all patients (100%), and splenomegaly – 2.0±0.2 cm in 39 patients (53.4%).

Conclusion: Acute hepatitis B virus affects both sexes, being more frequent in men, and is manifested through acute onset in the icteric form, the moderate form being characterized clinically by the dyspeptic, asthenic, and biochemical syndrome through the ALT activity increase, bilirubin and thymol test.

P15

Clinical and biological correlations in acute toxoplasmosis
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BMC Infectious Diseases 2014, 14(Suppl 7):P15

Background: Toxoplasmosis is a zoonosis caused by a coccidian protozoan, Toxoplasma gondii. Methods: The study included 407 non-pregnant women with high risk for toxoplasmosis, presented to the Infectious Diseases Clinic in Oradea in the period 01.01.2009-31.12.2012. By MEIA (Microparticle Enzyme Immunoassay) performed in Bioclinica laboratories, values of Toxoplasma IgG and IgM antibodies were determined and by EIA (Enzyme Immunoassay), the values of IgA Toxoplasma antibodies, as well as the dynamic tracing of their evolution over a period of 12 month.

Results: The results of investigations showed that 24.3% of non-pregnant women had acute toxoplasmosis, 25.6% had acute toxoplasmosis in their past, at a rate of 60% the serology was completely negative. Most cases of acute toxoplasmosis were diagnosed in spring and autumn (p=0.0373). The most affected range was the age group 21-25 and 26-30 (p<0.0001). The gynecologist and the patients’ own initiative has an important role in guiding them to make analysis (p<0.0001). The main reason for presentation to the Infectious Clinic was the appearance of adenopathies with cervical localization (p<0.0001). The optimum period of time
necessary to achieve negative level of IgM and IgA Toxoplasma was between 3 to 6 months after presentation (p<0.0001).

Conclusion: The infection with Toxoplasma gondii affects especially young women; most of the cases appear in spring and autumn.

P16

The cost-effectiveness of treatment in chronic HBV non-cirrhotic hepatitis – finite versus long-life therapy

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BMC Infectious Diseases 2014, 14(Suppl 7):P16

Background: Although the ideal end point of chronic HBV hepatitis is HBsAg loss, a realistic end point is the induction of sustained virological remission. The definitions of virological responses vary according to therapeutic regimen: viral load <2000 IU/mL after interferon (IFN) regimens and undetectable HBV-DNA during nucleoside/nucleotide analogues (NNA) regimens. Objective: To compare the direct costs of medication between two therapeutic strategies: NNA versus NAF after IFN in non-cirrhotic patients without contraindications for IFN.

Methods: We made a cost simulation analysis, in order to establish the best therapeutic strategy in HBV hepatitis. The rate of response after IFN therapy was about 40%. We theoretically compared the treatment costs for two groups of 100 patients: group 1 treated with entecavir 0.5 mg/day, and group 2, treated one year with IFN and then with entecavir in non-responders to IFN. In Romania the cost of IFN is 220 Euro/dose and the cost of entecavir 0.5 mg is 410 Euro/month.

Results: IFN cost for one patient who received 48 weeks of therapy is 10,560 Euro. For 100 patients the cost is 1,056,000 Euro. The cost of entecavir for one patient, per year is 4920 Euro. For 100 patients the cost of therapy per year is 492,000 Euro. If the IFN response is 20%, for 100 analyzed patients, 80 patients will be subsequently treated with entecavir. If entecavir will be recommended for 5 years the costs are: in group 1 – 2,460,000 Euro for 100 patients and in group 2 – 2,574,960 Euro (1,000,560 Euro for IFN plus 1,574,400 Euro for 80 patients treated 4 years with entecavir). The costs in these two groups are similar; the use of IFN is not cost-effective. If entecavir will be recommended for 10 years the costs are: in group 1 – 4,920,000 Euro for 100 patients, in group 2 – 4,542,960 Euro (1,000,560 Euro for IFN plus 3,542,400 Euro for 80 patients treated 9 years with entecavir). A similar analysis for 40% response to IFN, shown that the supplementary cost in group one is 278,640 Euro for 5 years and 1,262,640 Euro for 10 years.

Conclusion: We need real life studies in order to appreciate the rate and the durability of immune response after IFN therapy. If this rate is 20%, the use of IFN is cost-effective only if entecavir will be used for 10 years or more. For 40% response the use of IFN seems to be cost effective regardless the duration of entecavir therapy.

P17

Clinical and immunological evaluation of late diagnosed patients with HIV/AIDS infection in the Republic of Moldova

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Background: HIV/AIDS infection is one of the priority issues of public health both globally as well as in Republic of Moldova. The negative impact of late presentation and detection is important for the health system, by increasing mortality and morbidity through requiring additional resources and for the community by transmission of HIV.

Methods: We assessed 149 treatment-naïve patients with HIV/AIDS who initiated HAART in 2011-2012. The age of patients included in this study were between 18 and 77 years (36.3±0.8 years), out of which 60% were young people between 30 and 39 years. Late diagnosis was defined as the presence of AIDS related diseases and/or CD4 <350 cells/cmm.

Results: The following modes of transmission were identified: heterosexual – 130 (87.3%) patients and IDUs (injecting drug use) – 19 (12.7%) patients. Out of 149 patients, 94 (63.1%) patients were detected late with CD4 counts <350 cells/cmm, out of which 56 (59.6%) patients were detected very late with CD4 counts <200 cells/cmm. HIV/AIDS infection was diagnosed during the period 1997-2011, and HAART was initiated in 2011. The period from detection of HIV infection to HAART initiation was less than 1 year to 1/3 of all patients – 47 (31.6%), 1 year – 21 (14.1%), 2 years – 15 (10.1%), 3 years – 20 (13.4%), 4 years – 15 (10.1%), 5 years – 10 (6.7%), 6 years – 5 (3.3%), 7 years – 6 (4%), 9 years – 2 (1.3%), 10 years – 1 (0.7%), 11 years – 3 (2%), 13 years – 3 (2%) and 14 years – 1 (0.7%). The average CD4 cell count at detection of HIV infection was 283.5±16.2 cells/cmm, and lower at initiation of HAART (220±11.3 cells/cmm). (p <0.01). At detection of HIV infection approximately 1/3 of patients (30.9%) had viral load >100000 copies/mL.

Conclusion: About 2/3 (63.1%) of patients with HIV/AIDS are detected late, compared to 15-38% of the cases in the European Union, thus it is necessary to improve HIV testing strategies. The route of transmission of HIV infection was heterosexual – 87.3% and through injecting drug use – 12.7%. It was established that at the start of HAART the most common opportunistic infections were oropharyngeal candidiasis – 82 (55%) patients, tuberculosis – 34 (22.8%), wasting syndrome – 19 (13.1%), herpes zoster – 12 (8.3%), Kaposi’s sarcoma – 4 (2.8%). At the initiation of HAART 110 (73.8%) were diagnosed with AIDS.

P18

Clinical aspects of acute pneumonia in Bihor county

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Background: In developing countries, acute pneumonia is a very important public health problem.

Methods: Our goal was to study all the 420 patients with acute pneumonia who were admitted to the Infectious Clinic in Oradea between 01.01.2013-31.12.2013. The diagnosis was performed based on clinical, biological and radiological criteria.

Results: Most of the patients came from rural area (60%). 55% of them were young people between 30 and 39 years. Late diagnosis was defined as the age group 51-55 and 61-65. Most cases of acute pneumonia were diagnosed in autumn. Associated pathiology was observed in old patients (47%).

Conclusion: The most exposed category of age was represented by adults between 51 and 55 years and 61 and 65 years old.

P19

Coexistence of prion disease and benzodiazepine intoxication – Case report

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BMC Infectious Diseases 2014, 14(Suppl 7):P19

Background: Human transmissible prion disease has a fatal outcome with no specific treatment. Oral benzodiazepine intoxication rarely results in significant morbidity and mortality. Thus, deep nonresponsive coma should be investigated for additional etiologies.

Case report: A 26 year-old female presented for deliberate ingestion of 200 mg benzodiazepine associated with 500 mg metoprolol and she
was admitted in our Toxicology - Intensive Care Unit one hour following the ingestion. Clinical evaluation showed a conscious patient, mildly agitated, with stable vital signs and unusual hypersomia. She also had a history of about 10 months of psychiatric symptoms like mood disorders, memory loss and insomnia treated as depression. The interview emphasized multiple study visits in the United Kingdom and occasional intravenous abuse and substances dependence. Her urine benzodiazepine level was positive according to fluorescence polarization immunooassay method and the toxicological screening was negative for other drugs. Ten hours after ingestion she developed impressive opisthotonus and deep coma that required mechanical ventilation. Regarding the high suspicion of tetanus due to her intravenous drug administration, the infectious disease evaluation indicated anti-tetanus serum therapy. Brain tomography (CT) was in normal ranges. The cerebrospinal fluid (CSF) had a clear aspect and was normotensive, without biochemical abnormalities. After 48 hours of nonresponsive evolution a new brain CT scan identified massive cerebral edema. Brain magnetic resonance imaging (MRI) showed hyperintensities on T2 sequences in basal ganglia bilaterally along with diffusion restriction in the same areas, being suggestive of progressive multifocal leukoencephalopathy. Considering these aspects we performed PCR for the detection of JC virus, which was negative. A prion disease was highly suspected and 14-3-3 protein immunoassay on CSF was positive. After 2 months spent in the Critical Care Unit, the patient died through multiple organ dysfunctions.

Conclusion: Our case underlines the importance of keeping an open mind when dealing with unexpected and unusual evolution of acute intoxication.

Consent: Written informed consent was obtained from the patient’s next of kin for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

P20
Comparison of Kaposi disease outlines in patients with and without HIV infection in two tertiary care hospitals in Bucharest, Romania
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BMC Infectious Diseases 2014, 14(Suppl 7):P20

Background: Kaposi disease (KD) displays polymorphic manifestations, ranging from minimal cutaneous involvement to extensive visceral disease. Its clinical outline is different in HIV-positive patients compared to the classical non-HIV-related form that is diagnosed more often in elderly patients without other significant immune impairment.

Methods: A retrospective study on KD was performed in two academic centers, tertiary-care hospitals with national addressability in Romania. Two groups were comparatively studied: HIV-infected patients diagnosed in the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” (HIV-positive group), and non-HIV patients diagnosed in the first Clinic of Dermatology, Colentina Clinical Hospital (HIV-negative group). The statistical analysis was performed using IBM SPSS Statistics v.22 (Chicago, USA).

Results: A total number of 71 cases, 30 in the HIV-positive group and 41 in the HIV-negative group were identified. The non-HIV patients were benign European form and immunosuppressed other than HIV, respectively. There was a male predominance, with a male-to-female ratio in HIV-positive and HIV-negative patients of 2:1 and 4:1 respectively. The mean age at KD diagnosis was 41.6±15.0 years in HIV-positive and 70.2±11.8 years in HIV-negative patients. The mean number of comorbidities was 3 in the HIV-positive group compared to 1 in HIV-negative, p=0.011. In the HIV-positive group, 17 patients (56.7%) were classified Mitsuysu stage 1, 6 (20%) stage 2, 2 (6.7%) stage 3 and 5 (16.7%) stage 4. In the HIV-negative group, all 41 patients were Mitsuysu stage 1.

In the HIV-positive group all patients received antiretroviral therapy and only 6 (20%) received other types of targeted therapy for KD: topical (5, 16.7%), systemic (3, 16.7% – interferon, etc.), chemotherapy (2, 6.7%), local radiotherapy (2, 6.7%). In the HIV-negative group, all patients received specific treatment, such as: topical (24, 58.5%), systemic (14, 34.1% – dapsone, pentoxifylline), chemotherapy (2, 4.9%), local radiotherapy (7, 17.1%), electrocauterization (15, 36.6%), surgical excision (4, 9.8%).

Loss for follow-up appeared to be less frequent in the HIV-positive group (7 patients, 35%) than in the HIV-negative group (35 patients, 85.4%) but occurred faster in the HIV-positive group, after a mean interval of 6.6±3.4 months in the HIV-negative group. Overall survival was 60% (HIV-positive) and 100% (HIV-negative).

Conclusion: This work has identified two different outlines of KD, an aggressive progression with high mortality in HIV-positive patients, and a gradual progression, with virtually no short-term mortality, in elderly patients. In the HIV-positive group, very few patients received other types of treatment for KD, apart from antiretroviral therapy.

P21
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BMC Infectious Diseases 2014, 14(Suppl 7):P21

Background: The chosen theme is relevant to show the progress in addressing public health services currently in Romania, especially the care of HIV-AIDS patients in the HIV-AIDS Regional Centre from Constanța.

Methods: We aimed to organize the existing case law in a database, which represents a prerequisite for further steps to elucidate the epidemiological process. We established three groups of patients: 1. Registered in the 1987-1993 period, which is the main cohort of children infected through nosocomial transmission – included in Study I, retrospective. 2. Registered in the 2008-2012 period – included in Study II, prospective. 3. Registered in the January – 30 June 2013 period – included in Study III, prospective.

We implemented a model of active epidemiological surveillance, with correlation of all factors, including new and old cases, based on monthly data reporting frequency. We processed the existing database, the records of consultations; we evaluated health surveys, laboratory data, clinical observation sheets multi-tracking, the register of psychological evaluation.

Results: During 1987 to 1990 the population was uninformed on the HIV-AIDS phenomenon; they later became familiar with the existence of infection, transmission patterns and healthcare opportunities (after 1990). The route of transmission was: transfusion, injections (parenteral, 84.549%). The treatments were performed in the pediatric ward, and the parenteral treatments in other sections (dystrophic, premature baby, swings). Orphan patients came from the wards dystrophic and premature, mostly being institutionalized or abandoned children. The epidemic was first rural and subsequently urban epidemic. Analyzing the pyramid of the ages, first time pediatric population prevails, subsequent adult population. The determinant virus is “wild”, new in circulation, belonging to subtype F1 overwhelmingly (99.9%). The diagnosis of the cases evolved from clinical diagnosis and HIV testing by ELISA, by modern means of today (phenotype, genotyping, imaging, resistance tests). The mortality rate fell spectacularly, especially due to the introduction of antiretroviral therapy. Constanța is the second HIV/AIDS center in the country. Since 2009 a “dedicated” pathological department is functioning.

Conclusion: The originality of the study: a descriptive presentation from the registers and studied observation sheets was transformed into a database, which was presented in the study. Constanța has come to represent a model for surveillance and monitoring of HIV nationally and internationally, many of the models of care, programs, were expanding to other counties and countries.
P22

Critically ill patients with infectious diseases – clinical, evolutive and etiological aspects

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Background: Infectious diseases (ID) are the second cause of death after cardiovascular diseases worldwide; severe sepsis and septic shock, syndromes induced by infection have an increasing incidence and high mortality requiring diagnosis and intensive therapy and appropriate attitude.

Objectives: to establish the clinical, evolutive and etiological aspects of ID evolving critically ill patients with ID.

Methods: Retrospective study (January 2013-March 2013) on 96 critically ill patients with ID hospitalized in the Intensive Care Unit of the “Victor Babeș” Hospital Craiova.

Results: General data of the study lot; gender distribution was balanced (M:F = 1:1), 75% of patients were from urban areas and the median age was 60 (IQR: 1-95) years. ID were: respiratory infection (67.71%), gastrointestinal (12.50%), urinary (9.37%), neurological (9.37%) and cardiovascular (1.05%). Failure or organ dysfunction (one or combination) in the study group: respiratory (69.79%), neurological (9.37%), renal (5.21%), liver (1.04%), hematologic (1.04%) and heart (1.04%). Sepsis was diagnosed in 35.42% of patients, severe sepsis in 22.92% and 5.21% developed septic shock.

Comorbidities were identified in 88.54% of patients (one or combination) as follows: chronic cardiovascular diseases – 39.58% of patients, neuropsychiatric – 16.67%, pulmonary – 12.5%, obesity – 10.42%, HIV – 9.37%, urogenital – 8.33%, diabetes and cancer – 7.29% each, others – 11.46%. Favorable outcome was recorded in 88.54% of cases, death was recorded in 11.46% of cases. The etiology had been identified in 32.29% of the cases, as follows: bacterial etiology – 74.20% of the cases, viral and parasitic each in 12.90%. The etiology of ID was represented by: Gram-negative bacteria (38.71%), Gram-positive bacteria (22.58%), Mycobacterium tuberculosis and Toxoplasma gondii (12.90% in each case), measles virus (9.68%) and pdm2009 influenza virus (3.23%).

Conclusion: Critically ill patients with ID presented most commonly respiratory or gastrointestinal infection and most frequently developed respiratory or neurological failure or dysfunction. Most critically ill patients with ID associated comorbidities, most commonly chronic cardiovascular diseases. Evolving critically ill patients with ID had significantly increased risk of death. Gram-negative bacteria dominated the etiology of ID in critically ill patients, followed by Gram-positive bacteria.

P23

Cutaneous side effects of combination therapy of pegylated interferon 2α and ribavirin

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Background: Hepatitis C virus infection is the main cause of chronic liver disease, and patients are at risk of developing liver cirrhosis and hepatocellular carcinoma. The treatment in CHC is the combination of pegylated interferon 2α (peg-IFN) and ribavirin (RBV), the standard therapy with 24 to 48 weeks regimen. Cutaneous adverse effects are common, with a higher incidence in combination therapy than in IFN alone, and when serious, discontinuation of therapy is mandatory.

Case report: We report the case of a woman who developed an exanthematos drug eruption during peg-IFN and RBV combination therapy for CHC. The patient was clinically examined and we performed routine tests and PCR for HVC-RNA.

A 54-year-old woman with chronic hepatitis C (HCV viral load of 1,432,722 IU/mL), presented with generalized rash and pruritus, which appeared on the upper extremities and trunk after receiving her eighth weekly injection of peg-IFN 2α (180 mcg/week), in combination with daily oral RBV (1000 mg/day) and spread to the face, palms and lower extremities. Dermatological examination revealed an erythematous maculopapular eruption, symmetrically distributed over the trunk, extremities, cheeks and ears, associating moderate pruritus and xerosis. On her left thigh, the patient presented an ill-defined, slightly pruritic, erythematous round patch, localized to the point of administration. On both palms and fingers, there were multiple symmetric, firm, deep-seated vesicles, with intense pruritus.

The patient was treated with desloratadine and methylprednisolone acetonate ointment 0.1%, for 10 days, with complete clearance of the eruption and cessation of pruritus. The localized patch at the site of injection healed within a month with diffuse desquamation and mild postinflammatory pigmentation. During follow-up, the patient presented with new erythematous patches at the administration point of peg-IFN.

The patient reported lacking appetite, feeling weak, nauseous and dizzy. After 12 weeks treatment, ALT and AST, with initially high values, normalized. However, considering the low virologic response (viral load 57,126 IU/mL), the patient’s overall clinical status, low prothrombin index, low body mass index and significant blood count abnormalities (anemia, thrombocytopenia and neutropenia), we decided to discontinue therapy, without new lesions at follow-up.

Conclusion: The dermatological diagnosis was exanthematous drug eruption, which was considered a side effect of combination therapy with peg-IFN and RBV, due to the time link between the development of lesions and the CHC therapy, lack of other cause of eruption, and complete resolution after treatment withdrawal. Furthermore, the patient is still monitored and we consider other treatment options.

P24

Dietary management of dyslipidemia in HIV-infected young adults in antiretroviral treatment

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Background: HIV infection is a manageable disease with antiretroviral treatment, but this comes with the cost of metabolic disturbances. The most frequent issues are dyslipidemia and lipodystrophy. The scientific papers highlight the effectiveness of weight loss and healthy lifestyle to reduce serum lipids levels. Objective: to assess the effectiveness of nutritional intervention on dyslipidemia in HIV-infected young adults.

Methods: HIV-infected young adults on antiretroviral treatment, with a follow-up of at least 10 years in the National Institute for Infectious Diseases “Prof. Dr. Matei Balș”, were evaluated (anthropometric and biochemical measurements). The dietary habits and physical activity were assessed using a questionnaire administered by an interviewer. We drew up a healthy nutrition plan based on energetic needs, to maintain or to lose weight.

Results: We assessed 18 patients, but only 11 of them (8 males/3 females, 25 years old) gave their written consent to nutritional counseling. Overweight and obesity were detected in 54.6% of cases. With respect to dietary habits, 81% had a high intake of saturated fats, 72% had a high intake of added sugar and 100% had a low intake of fibers. The most frequent types of food eaten were fast-food, maturated cheese, sweets and soft drinks. More than 80% had sedentary behavior. The most frequent laboratory abnormality was high level of serum triglycerides 10/11 cases, 5 cases associated high levels of serum total cholesterol with 4 high low-density lipoprotein cholesterol (LDL-c) and 9 cases had low high-density lipoprotein cholesterol (HDL-c).

Only in two cases, we had completed 6 weeks of follow-up and we performed a clinical and laboratory evaluation. In the first case, the patient followed all recommendations and the value of triglycerides and cholesterol were back to normal and he lost weight (6 kg). In the second case, the patient followed almost all recommendations, except that
instead of gas sodas she drank non-carbonated sweetened juices. So, in this case the triglycerides did not return to normal, but we still noticed a lower level compared to baseline.

Conclusion: Nutritional counseling for overweight/obesity and dyslipidemia in HIV infected patients is cheaper than lipid-lowering drugs and it had no effects on antiretroviral treatment. We need a longer time of follow-up and more patients to be able to draw conclusions, to see if the duration of the effect on metabolism is durable and to find a proper dietary pattern which may prevent or undo antiretroviral side effects.

P25
Differential diagnosis of reactive arthritis in a patient with intravesical BCG immunotherapy
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Background: Intravesical administration of bacillus Calmette-Guerin, a live attenuated strain of Mycobacterium bovis, is an adjunctive therapy for superficial bladder cancer. While generally well tolerated, both local and systemic complications may appear. The dose of BCG in instillations is 100 fold higher than a BCG vaccine.

Case report: We report the case of a 50 year-old female patient known with bladder tumor operated in January 2014 followed by 4 weeks of intravesical BCG immunotherapy, one administration per week. After each course the patient accused low grade fever, nausea, poliakuria and hematuria with limited duration. In March 2014, after a cystoscopy and a bladder resection, she underwent another 5 weeks of BCG instillations. After the fourth course the patient presented to our clinic for fever with chills, poliakuria, hematuria, conjunctivitis, myalgia and disabling migratory arthritis of the left ankle and right knee.

Clinical exam at admission: high fever, left ankle and right knee arthritis, impaired mobility in the left temporomandibular joint. Following admission the patient developed left metacarpalphalangeal and proximal interphalangeal arthritis of the index and medius. She had leukocytosis with neutrophilia, reactive thrombocytosis and high biologic inflammatory syndrome. Urinalysis showed frequent leukocytes, no albuminuria and negative cultures.

The patient underwent arthrocentesis for synovial fluid sampling; the smear showed absence of bacteria, 40% polymorphonuclear cells, 15% small lymphocytes, 20% medium lymphocytes, 25% large lymphocytes and the Ziehl-Neelsen smear was negative. The culture for Mycobacterium spp. was negative.

Suspecting a BCG arthritis and cystitis we started empiric antituberculous (antiTB) and glucocorticoid therapy. A week after admission Serratia marcescens was identified in one blood culture out of three collected, so we added ertapenem for 14 days.

Rheumatological examination raised suspicion of an autoimmune illness, but all specific blood tests were negative. Despite that, the rheumatologist added sulfasalazine, considering that even BCG arthritis can associate an autoimmune disease. After 2 months of antiTB, glucocorticoid and sulfasalazine treatment the evolution was favorable, with remission of arthritis and fever.

Conclusion: In our case, the cause of arthritis could be the BCG instillations, an autoimmune illness or the infection with Serratia marcescens. While the long-term progression of symptoms despite antiTB treatment is a strong argument in favor of an autoimmune cause (negative D.8, being a counterargument), we cannot exclude the immune disorder caused by BCG immunotherapy.

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P26
Dual infection with Acinetobacter baumannii and Klebsiella pneumoniae in a patient with multiple comorbidities – case presentation
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BMC Infectious Diseases 2014, 14(Suppl 7)P26

Background: Bacterial coinfection is a rarely described phenomenon. We present a case of dual infection in a patient with multiple comorbidities and advanced immune-suppression.

Case report: A 35 year-old male patient presented to our clinic in May 2014 for progressive malaise, low-grade fever and nausea. His medical history revealed chronic glomerulonephritis and renal failure with hemodialysis from 2005 to 2010; kidney transplant in 2010, with transplantation rejection and positive CMV-IgM in March 2014. He also presented arterial hypertension, ischemic heart disease and left ventricular hypertrophy since 2010, multiple episodes of sepsis and pneumonia with Klebsiella spp. through digestive microbial translocation (colonic ulcerations), and a double aortocoronary bypass in March 2014. The thoracotomy incision had healed almost completely, but the right calf incision presented signs of infection.

His concomitant therapy included anti-hypertensive agents, antiplatelet therapy, ganciclovir, immune-suppression therapy with mycophenolic acid, and prednisone (10 mg/day).

On admission, the clinical exam was normal, except for bilateral lower limb edema and inflammation of the right calf incision area, with multiple patches of exposed soft tissue and suppuration. Biologically, he presented pancytopenia (WBC 2,100 cells/ul, hemoglobin 6.8 g/dL, thrombocytes 137,000 cells/µL), nitrogen retention syndrome (urea 147.4 mg/dL, creatinine 4.4 mg/dL). The patient’s reactivity was quite low given the concomitant immune-suppressive treatment, with ESR 36 mm/h, fibrinogen 351 mg/dL, and CRP 10 mg/L.

Urine cultures, repeated blood cultures and procalcitonin were negative, but the smear from the right calf incision wound identified identifiable Gram-negative and Campylobacter colonies, and CLED cultures grew smooth, yellow, lactose-fermenting colonies. Microscan (Siemens, Munich, Germany) identified carbapenemase-producing Klebsiella pneumoniae (KPC) and the strain was subcultured and grew a smooth, gray, non-lactose-fermenting colony, identified on VITEK (bioMérieux, Paris, France) as Acinetobacter baumannii. Both strains were resistant to all tested drugs except for colistin and tigecycline. As both strains initially grew in a single isolated culture, with homogenous morphology, it took repeated cultures to separate the two strains. The patient’s evolution was favorable under treatment with tigecycline and local instillations of colistin.

Conclusion: We have presented a case of coinfection with two extremely resistant Gram-negative strains in a patient with multiple comorbidities and limited treatment options. Interestingly, both strains grew entwined in a colony that presented a single morphology not suggestive for coinfection. Bacterial identification techniques allowed an etiologic diagnosis and targeted antimicrobial therapy.

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P27
Efavirenz‘ adverse reactions: a possible link between depression and gynecomastia
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BMC Infectious Diseases 2014, 14(Suppl 7)P27

Background: Efavirenz, a non-nucleoside reverse transcriptase inhibitor, is widely used in antiretroviral treatment for HIV infection and has been associated with psychiatric adverse effects leading to treatment discontinuation.

Methods: A case report of a 33-year-old HIV-positive woman with a history of depression treated with Efavirenz who developed gynecomastia.

Results: The patient developed gynecomastia and depression after 9 months of antiretroviral therapy with Efavirenz. A careful review of the literature revealed a possible link between Efavirenz and gynecomastia, as well as a possible link between Efavirenz and depression.

Conclusion: Efavirenz use is associated with psychiatric adverse effects, including depression and gynecomastia. Further research is needed to confirm these associations and to develop strategies to mitigate the risk of these adverse effects.

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1) POSDRU/159/1.5/S/137390.
2) Carol Davila University of Medicine and Pharmacy, Young Researchers Projects Grant Competition, contract number 28.336/04.11.2013.
Background: Reports show that 1.8–8.4% of male patients receiving efavirenz (EFV) develop gynecomastia by unclear multiple mechanisms, one of them being a direct binding to estrogen receptors. However, EFV can independently cause gynecomastia by increasing prolactin levels and we postulate that this mechanism is a dopamine-mediated one. Dopamine is a strong prolactin inhibitor. Conversely, a lack of dopamine can cause hyperprolactinemia. On the other hand, dopamine is an antidepressant neurotransmitter and depression is one of the very frequent adverse reactions to EFV. We present the case of an HIV-positive newly diagnosed male patient who developed mild depression and amplified a preexistent gynecomastia after the introduction of an EFV-containing antiretroviral regimen.

Case report: A 41-year-old male patient, diagnosed with CDC-A2 HIV infection, had been receiving antiretroviral treatment (ART) for 14 months with ABC+3TC+EFV and had been favorably evaluated regarding the immuno-virological course. Nevertheless, after 6 months of ART he developed bilateral gynecomastia with mastodynia and he reported also mild depression. A careful anamnesis discovered a previous mild gynecomastia with also mild rising in prolactin level. Current clinical examination showed moderate bilateral concentric gynecomastia. The breast echography was normal. Brain MRI was performed and can’t exclude microprolactinoma. Lab findings showed normal levels of estrogen and testosterone and high levels of prolactin. We considered dropping EVF and replacing it with raltegravir. After switching (raltegravir doesn’t affect the endocrine ax) mastodynia ceased in one month, the breast volume regressed in 2-3 months and the prolactin level decreased. Besides, the depression’s symptoms diminished.

Conclusion: In the presented case, gynecomastia was related to hyperprolactinemia and the last was related to EFV use. Moreover, the patient presented also an EFV related depression. It makes sense to consider a unique mechanism for both EFV’s adverse reactions: a drop in dopamine-level caused by EFV, which produce depression and also a hyperprolactinemia with gynecomastia.

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P28 Early serum screening for hepatocellular-carcinoma in patients with hepatitis
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Background: Chronic hepatitis is an important problem worldwide, associating high morbidity and mortality, and hepatocellular-carcinoma is one of its most severe complications. Multiple studies have tried to identify biomarkers that would allow an earlier detection of hepatocellular-carcinoma (HCC), compared to imagistic exams. Such biomarkers are represented by alpha-fetoprotein (AFP), des-γ-carboxy prothrombin (DCP), and the lens culinaris agglutinin-reactive fraction of alpha-fetoprotein (AFP-L3).

Methods: Since January 2014, the National Institute for Infectious Diseases "Prof. Dr. Matei Balş" has implemented a screening program for hepatocellular carcinoma in patients with hepatitis. The program involves a serum panel performed in the Lotus-MED Medical Center, consisting of AFP, DCP and AFP-L3, performed at two study visits: screening and 48 weeks follow-up. As the study is still ongoing, we present descriptive data derived from the first study visit.

Results: We have enrolled 120 patients; their mean age was 56.6±12.2 years, and the male-to-female ratio was 1.07:1. The patients were diagnosed with chronic hepatitis B (8.8%), chronic hepatitis C (72.5%), B + D coinfection (9.9%), idiopathic hepatitis (4.4%) and other causes of liver disease (4.4%). Only 65% of patients had cirrhosis, and 8% of them had a diagnosis of hepatocellular carcinoma.

The mean values for the serum panel tests were 158.95±1419.82 ng/mL (AFP), 11.68±59.20 ng/mL (DCP), and 14.83±21.85% (AFP-L3). In the group of patients with cirrhosis, the positive prediction for HCC based on the serum panel tests was 32.20%. 23.53% of the persons with positive prediction already had a diagnosis of HCC, while 92.5% of the persons with negative prediction did not have a history of HCC. The test’s sensitivity for predicting HCC was 57.14%, and its specificity was 74%. The positive predictive value (PPV) was 23.53% and the negative predictive value (NPV) 92.5%.

Conclusion: Our preliminary results represent the first serum panel predictions for HCC in the population of Romanian patients with chronic hepatitis. However, given the fact that only 65% of patients displayed cirrhosis at the time of testing, the analysis has also been applied outside of its validated range, and we can only rely on the data available for patients with cirrhosis. The patients will be re-investigated at 48 weeks, and only then will we be able to calculate an accurate sensitivity, specificity, PPV or NPV, as this serum test is thought to predict a patient’s probability of developing HCC over the next 6 months.

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P29 Clinical and laboratory characteristics in leptospirosis
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Background: Leptospirosis is one of the most common zoonoses in the world, with a wide range of manifestations that can vary from mild to severe with acute hepatic and renal failure, pneumonia or meningitis. Between 2005-2011 in Romania, according to ECDCC, 1740 cases have been reported. Objective: To describe clinical and laboratory characteristics of confirmed cases of leptospirosis.

Methods: Retrospective study, between January 2004-June 2014, in one infectious diseases hospital in Bucharest. We included patients with leptospirosis diagnosis at discharge and/or positive serology for leptospirosis. Serological diagnosis of acute leptospirosis was made by microscopic agglutination test using a battery of 17 antigens from international reference strains in one national reference laboratory and/or positive IgM-enzyme-linked immunosorbent assay (ELISA). Statistical analysis was performed with SPSS v19.0; continuous variables were described with medians and ranges; categorical variables were described with numbers and percentages.

Results: Of 132 patients with leptospirosis diagnosis at discharge, 105 (80%) had positive serology for leptospirosis. The median age was 37 (IQR 29-53) and 94 (90%) were male. 71 (68%) patients were diagnosed between May and September, 54 (51%) lived in urban areas and 8 (8%) patients had professional exposure. Leptospirosis serotype has been identified in 75 (71%) patients. 9 (9%) patients had meningeal involvement, 12 (12%) patients respiratory manifestations, 66 (63%) patients renal impairment and 38 (36%) patients coagulation impairment. The median level of alanin aminotransferase, gamma-glutamyl transpeptidase and total bilirubin was 88 IU/mL (IQR 50-158), 162 IU/mL (IQR 86-279) and 4.7 mg/dL (IQR 1.2-14.7), respectively. Leukocytosis (WBC >10.000/µL) was present in 55 (52%) patients, severe neutropenia (PLT <50.000/µL) in 25 (24%) patients and 87 (83%) patients had inflammatory syndrome. In-hospital mortality was 4% (4/105).

Conclusion: Liver and renal failure were the most common manifestations in leptospirosis. Increased awareness should be maintained in order to diagnose and initiate early adequate treatment to reduce mortality and morbidity.
Epidemiological considerations on HIV infection in Constanța region

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Background: Lack of available epidemiological studies and circulation of unverified and unsubstantiated scientific information contributed to the uncertainty regarding the onset, causes and epidemiological developments in Romania. This paper aims to formulate epidemiological considerations on evolution of HIV infection based on a retrospective and prospective epidemiological analysis of 2 groups (A and B) of patients from Constanta, period 1987-2013.

Methods: We processed the existing database, records of the consultations, surveys on assessing health status, pathological, laboratory data, clinical observation on multicriterial sheets, the register of deaths and pathological examinations, presented in 3 studies: epidemiological retrospective description from 1987 to 1993, prospective in period 2008 – 2012 and during the period January – 30 June 2013.

Results: Group A (acute evolution – from the 1987 to 1989 cohort, the natural history of the disease), survival rate: 18-24 months initially, then 4-5 years, received only palliative care and medical assistance, causes of death: opportunistic infections and high mortality.

Group B contains two segments: the 1987-1989 cohort and patients infected by other routes: heterosexual, IDU, MSM, MTCT), with chronic evolution between 2008 – June 30, 2013, patients undergoing antiretroviral therapy 10-11 years (2008), 12-13 (2008), 18 years (2013), both derived from cohort and newly detected, average survival 10 to 11 years, reduced mortality, predominantly through TB or pneumocystosis, polyexperimented patients, exhausted immunological or non-adherent status. There are long-term survivors (slow progressors and non-progressors), which completed, part of them, the natural history of the first group, provided they did not need treatment, because of a less influenced immunological status.

There are four models of evolution: group A – acute and over-acute evolution – fast progressors (mortality rate increased, duration of survival of 4-5 years), group B – chronic evolution – late presenters, slow progressors, non-progressors – the 3 new “patterns” are correlated with an increase in average life expectancy to 10.5-11 years, due to, in the overwhelming majority, the therapy and the natural history. We estimate an evolution of the HIV-AIDS epidemic in Constanța County, on an average of 7-9 years, in the same parameters, which were characterized by the current study.

Conclusion: These results generate special concern in future epidemiological studies in depth to give the actual size of the phenomenon of HIV-AIDS in Constanța, and in Romania.

Erectile dysfunction in a cohort of HIV-infected male patients

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Background: The advent of antiretroviral therapy has transformed HIV infection into a manageable chronic disease, where improving the quality of life of HIV-infected patients has become one of the main focus points for physicians. The aim of our study was to evaluate the prevalence of erectile dysfunction and testosterone deficiency in a cohort of HIV-infected patients monitored in the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” Bucharest, from May 2014 to June 2016.

Methods: We evaluated a cohort of HIV-infected male patients. They completed a questionnaire to evaluate erectile dysfunction, based on the International Index of Erectile Function – IIEF (maximum score 30 for questions 1,2,3,4,5,15). Total testosterone was dosed in a subset of patients reporting erectile dysfunction (mild and moderate or severe) considering normal values >10 nmol/L. Five patients refused the test.

Results: 42 patients completed the questionnaire; they had ages between 23 and 69 years (mean age 36.8), 38 of them (90.4%) receiving antiretroviral therapy. 15 patients had a degree of erectile dysfunction (35.7% of total) and 2 patients had had no sexual activity in the last month: 12 patients had mild erectile dysfunction (score between 19-24), 2 patients had mild to moderate erectile dysfunction (score between 13-18), 1 patient had moderate erectile dysfunction (score between 7-12). Total testosterone was tested for 3 patients, 5 refused the test; all tests revealed normal values (>20 nmol/L).

Conclusion: This study showed that erectile dysfunction is highly prevalent, 35.7% of HIV-infected male patients have reported erectile problems.

Coxiella burnetii endocarditis – a real threat in the context of Q fever re-emergence

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BMC Infectious Diseases 2014, 14(Suppl 7) P32

Background: Q fever is a disease with worldwide distribution. The real number of patients with this disease is underestimated due to its nonspecific symptoms and because of the difficulties associated with serological diagnosis. Some of the patients diagnosed in the first stage with Q fever later develop chronic disease. Endocarditis is the most frequent and severe form of chronic Q fever. In the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” the number of patients diagnosed with Q fever has significantly increased in the last few years.

Methods: We retrospectively analyzed the patients diagnosed with Q fever with endocarditis in the Matei Balș Institute between 2011 and 2014. Of 89 patients with Q fever, 4 patients met the inclusion criteria (endocarditis plus serologic diagnosis of Coxiella burnetii).

Results: All the patients were males with a median age of 58.25 years. All of them lived in urban area and were admitted for prolonged fever. Three out of four patients presented hepatitis with ALT elevation and cholestasis at admission. All blood cultures taken during hospitalization were negative. Endocarditis diagnosis was established after echographic evaluation. In three cases the aortic valve was affected while in the other case the aortic valve was impaired. Detection of IgM antibodies for Coxiella burnetii by ELISA was used as screening test for the etiologic diagnostic that was confirmed by dosing phase I and II IgM and IgG antibodies. All patients initially received empiric therapy with association between beta lactams and aminoglycosides. After the etiologic diagnosis was established, the patients were treated with doxycycline in association with ofloxacin/ rifampin.

Conclusion: Coxiella burnetii must be considered as a possible etiologic agent in case of endocarditis with negative blood cultures especially in the context of increasing numbers of patients diagnosed with Q fever. The association between fever, hepatitis and intestinal pneumonia must be an additional argument for considering chronic Q fever with endocardial impairment a possible diagnosis.

Etiology of UTI – pathogens involved and their sensitivity to antibiotics

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Background: The study aims to evaluate the etiologic spectrum of urinary tract infections (UTI) and antibiotic sensitivity of isolates.

Methods: At the Infectious Disease Hospital in Constanța, between January 2014 and June 2014, urine cultures were performed in patients presenting urinary tract infections. Urine was seeded by loops calibrated technique on Columbia agar with 5% sheep blood and Drigalski agar. To identify the germs we used latex agglutination kits for Gram-positive germs and API galleries (BioMerieux) for Gram-negative bacilli. Antibiotics susceptibility testing was performed with the help of Kirby-Bauer disc diffusion method.

Results: Out of the total 805 urine samples performed, 160 turned out positive, isolating in 94 cases (58.7%) Escherichia coli, 25 cases (15.6%) Klebsiella spp., 12 cases (7%) Proteus spp., 15 cases (9.3%) Enterococcus spp., 7 cases (4.3%) Staphylococcus spp. and others – 7 cases (4.3%). E. coli was the most common etiological agent of UTI in women (64% of positive cases), men (42.3% of positive cases) and children (47% of positive cases).

Most of the isolated germs were highly susceptible to imipenem (94.4%) and fosfomycin (82.8%). Also, a good sensitivity to ceftriaxone (69.2%), quinolones (71.4%) and gentamicin (68.68%) was recorded. In addition, 56.6% of germs were sensitive to nalidixic acid and 56.6% to biseptol. We also noticed low sensitivity of germs to amoxicillin/clavulanic acid – 22.7%.

Conclusion: Escherichia coli was found in the highest percentage in urinary isolates, predominantly in women. There is an increased susceptibility of strains involved in urinary tract infections to fosfomycin – an affordable antibiotic that can be used in the treatment of these cases.

P34

Herpetic meningencephalitis and neurosyphilis – a rare association
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Background: A sudden onset of symptoms that sums up confusion and memory loss, associated with the characteristic cerebral MRI changes: T2 hyperintensity in mediotemporal area, are usually highly evocative for herpetic meningencephalitis. The medical literature data describe cases of patients with symptoms and MRI changes that are typical for this infectious pathology, but that proved to be in fact cases of neurosyphilis mimicking herpetic meningencephalitis.

Case report: We describe the case of a patient hospitalized in INBI “Prof. Dr. Matei Balș”, having clinical and imaging suspicion of herpetic meningencephalitis, for which he promptly received acyclovir treatment and he had a spectacular favorable evolution. Because the patient’s family reported that the patient presented impaired memory and personality changes for several months, we decided to perform VDRL and TPHA quantitative tests from blood and cerebrospinal fluid (CSF) and the tests were positive. The patient was started on treatment for neurosyphilis, a week after acyclovir, as soon as we had the laboratory confirmation of the suspicions raised on the basis of the patient’s history. Unfortunately, due to some administrative difficulties, we couldn’t perform PCR for HSV from the CSF. However, the fact that the patient’s evolution was favorable only with acyclovir, allows us to believe that we were in front of a rare combination of herpetic meningencephalitis that occurred on an incidentally discovered neurosyphilis.

Conclusion: To our knowledge, this may the first reported case of such an association. Neurosyphilis was confirmed on the basis of the specific tests performed from blood and CSF. Herpetic meningencephalitis was highly suspected because of the symptoms, the MRI result and the spectacular improvement of the patient’s status only with acyclovir treatment. This case emphasizes the fact that an infectious pathology may not always be what it first seems to be, and that we should pursue and clear any suspicion that we might have at some point.

P35

HIV viral load assessment in multiple sanctuaries – case presentation
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Background: In our era, the profile of the HIV-infected patient has completely changed. We are now treating poly-experienced patients interested in their quality of life, where management of drug-associated adverse reactions and eradication of viral reservoirs constitute important issues.

Case report: We present the case of a 57-year-old male patient, diagnosed with HIV infection for 14 years, and poly-experienced to antiretroviral (ARV) therapy (history of over 15 past ARV regimens). Early on in the evolution of HIV infection, the patient developed arterial hypertension, cardiomyopathy, 80% bi-carotid atheromatosis, and neurocognitive impairment.

The patient also developed dyslipidemia and significant lipodystrophy correlated with the use of first generation protease inhibitors. The impressive size of the buffalo hump led to impaired respiratory movements and trachea compression (identified through bronchoscopy, which had been indicated for the differential diagnosis of lung cavities; unfortunately because of the tracheal compression, bronchoscopy could not be performed). A surgical intervention for lipodystrophy had to be deferred because of the inability to maintain a stable ARV regimen, with undetectable viral loads. In Sep 2010 we managed to establish a stable ARV regimen, with boosted darunavir plus etravirine plus raltegravir. Plasma viral load decreased slowly, but it fluctuated, and it was only in Jan 2013 that the patient reached stable undetectable levels, and at this point, his CD4 cell count had increased to 321 cells/mm3.

In early 2014, after the patient had been virally suppressed for approximately one year, he was referred to a plastic surgery clinic, where he underwent successful lipospiration of 12 kg of adipose tissue from the buffalo hump, along with reconstruction of adipose facial features.

Thus, the surgical procedure had a double role, both esthetic and functional, leading to improved pulmonary ventilation and a better tolerability to performing daily activities.

Given the history of difficulty maintaining a suppressed viral load in his patient, we assessed the potential HIV compartmentalization: after 6 months of consistently undetectable viremia, we performed sperm viral load (undetectable) and CSF viral load (undetectable), and after one year of viral suppression, we performed a viral load from the adipose tissue (results still in process).

Conclusion: In patients with a long history of HIV infection and ARV therapy, there is need for close monitoring and interdisciplinary management of comorbidities, as well as viral load evaluation of HIV sanctuaries, where possible.

Consent: Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

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P36

HIV-AIDS epidemiological model in Constanța County
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Background: The evolution of AIDS cases in Constanța County during 1985-2003 shows a rapid upward detection curve in children in the first decade, a low rate of screening in adults in the first decade, with
absolute predominance of cases in children and progressively slower increase in the number of cases identified in the second decade, on account of the increase in the number of cases in adults. The main objective of this paper is to present the retrospective and prospective HIV/AIDS epidemiological model.

Methods: Organization and data collection was performed, through analysis in terms of ordering data, correlation, and validation: descriptive analysis of the elements that determine the distribution of cases. We have identified characteristics from: 1. Time - tendency (age pyramid); 2. Place - geographic (latitude, longitude - Black Sea port, airport, tourist city), geological, industrial (petrochemical - Midia Năvodari), agriculture, climatic, geopolitical conditions, prior to 1989, blood products, pollution status, place of work (childcare institutions, sex workers, accidental exposure); 3. We evaluated the determinants of public health problems - variable 'person' (belonging to a group of high-risk, the health providers, travelers, isolated populations, risk of infection). Aspects of demography - biological epidemiological indicators like gender/sex (M, F), age (age group, adult - children), ethnicity, race, area of origin (U, R), village of origin, place of residence, behaviors [donor blood, MSM, heterosexual, IDU, sex workers], profession, occupation, life style, socio-economic level, and other information - migration, tourism) We proposed to observe, to describe cumulative data, the explanation of the phenomenon, to monitor, to control (preventive measures, and curative - ARV) and to formulate the considerations based on epidemiological verified data.

Results: In Constanța, the top of the curve-infection was 1988, possible transfusion (epidemiological surveys). Constanța - first certified center in Romania, first family foster homes and palliative therapy center, the highest percentage (99%) of testing of pregnant women. Healthcare system in Constanța always has anticipated the national Healthcare System development (epidemiological information flow models). The tracking system through clinical indicators to monitor and evaluate (July 2009). Initially management of a pioneer public-private partner relationship with Baylor Constanța is methodological center.

Conclusion: The role of epidemiologist has been required - the clinician community! The role of the multidisciplinary team is relevant. Establishment of epidemiological valuable databases on the environmental impact (transmission, iatrogenic) of HIV can be a model for monitoring other chronic infections (hematology, hepatology, and oncology).

P38
Infections identified by serological screening at blood donors in Dolj County
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Background: Serological screening of blood donors provides data on seroprevalence of certain infections among apparently healthy people of working age population belonging to a particular geographic area. The study’s objectives pursued the prevalence of infection with hepatitis B (HBV), hepatitis C virus (HCV), human immunodeficiency virus (HIV) and Treponema pallidum on a sample population of Dolj County represented by volunteer blood donors.

Methods: The retrospective study included results from the immunological tests performed at the Regional Centre for Transfusion and Blood Conservation Craiova during the 1st of January 2008 and the 31st of December 2013. The testing included 28,091 adults with ages ranging between 20 and 64 years with no risk factors that met the criteria of selection for blood donation. The immunology test was performed by ELISA to determine HBsAg, HCV-Ag, anti-HIV and anti-Treponema pallidum IgG.

Results: Infections without clinical manifestation have been identified in 5.92% of blood donors tested: HBsAg - 3.53%, Treponema pallidum - 1.09%, HIV - 0.62%. In relation to age, higher prevalence in young patients (20-35 years) was found for HIV and HBV and after 35 years infection with HCV and Treponema pallidum.

Conclusion: The prevalence of infections with HBV, HCV, HIV and Treponema pallidum did not exceed the average values for the studied population. The risk of infection of the blood test showed etiological features related to age and sex. Health education measures and specific prophylaxis may limit the transmission of these infections within the community.

P39
Influence of hepatitis C virus on serum glutathione-S-transferase
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Background: Glutathione-S-transferases (GST, EC.2.5.1.18) are a family of enzymes that catalyze the conjugation of some harmful electrophilic compounds with glutathione, and thus, they are transformed in nontoxic lipophilic substances. In this study we aimed to evaluate the effect of hepatitis C virus on serum level of GSTp1 in patients with active systemic lupus erythematosus (SLE).

Methods: Serum level of GSTp1 was quantified by immunoenzymatic method in 42 patients with active systemic lupus erythematosus (based on SLEDAI score), without any treatment divided in two groups: Group A – 30 cases with active SLE (SLEDAI=11±2±3±2), with chronic C hepatitis; Group B – 12 cases with active SLE (SLEDAI=12±1±4±5) without hepatitis C. The results were compared to those obtained in the control group, which included 42 healthy subjects.

Results: We determined increased levels of GSTp1 in patients with active SLE without C hepatitis, when compared with the control group (236±82 versus 211±58, p<0.05). In patients from group B, the level of GSTp1 was statistically significant higher than in patients from group A (286±36 versus 236±82, p<0.05), respectively in control group (266±36 versus 217±39, p<0.05).
Conclusion: The increased levels of GSTpi in patients with SLE and chronic C hepatitis sustain the hypothesis that the release of this intracellular enzyme might be influenced by hepatitis C virus infection. This information might be useful for a better understanding of hepatitis C pathogenesis.

P40
Intercurrent and opportunistic infections in patients treated with biological agents: study hypothesis
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BMC Infectious Diseases 2014, 14(Suppl 7)P40

Background: Biologic therapy has been used for over 10 years and is increasingly used in the treatment of many chronic inflammatory diseases. At the present time it has a very broad range of applications: rheumatic, dermatologic, gastro-intestinal, neurologic and neoplastic diseases. Biologic therapy is represented by immunomodulator agents (antibodies or other peptides) that interfere with the regular humoral immune response. Thus, in addition to the beneficial effects in relation with the underlying disease it may lead to opportunistic infections: bacterial, viral, fungal, or parasitic.

Study hypothesis: Opportunistic infections in patients on biological therapy may represent cause for concern, given the increased risks of infection in this category of patients. Our objective is to conduct a study on two research directions:

- 1) A prospective, observational study which will consist of a group of patients undergoing treatment with biologic agents and a control group. Study visits will occur at the baseline, and then every 24 weeks plus unscheduled visits when required in case of infections. We will evaluate the following parameters: blood tests (CBC, biological inflammatory syndrome, coagulation, biochemistry), cytokines values, QuantiFERON TB Gold, urine analysis, blood cultures and nasal, pharyngeal and axillary carriage.
- 2) A retrospective study (statistical analysis) of the already existing data collected in Romanian Registry of Rheumatic Diseases which contains an up to date list of all the patients with RA (within the country) currently undergoing biologic therapy.

Expected Results: The objectives of the study are: to determine the rate of occurrence of intercurrent and opportunistic infections in patients undergoing biological therapy within the country (data which is not available at the moment), to compare this information with the available external data and to define a particular profile for patients susceptible to secondary infections due to biological therapy.

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P41
Interpretation and management of AGC cytology
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BMC Infectious Diseases 2014, 14(Suppl 7)P41

Background: Cervical cytology has continually evolved. Nowadays, the category of atypical glandular cells (AGC) is less frequent than atypical squamous cells (ASC), associating poorly-reproducible inter-observer interpretation. Cellular characters sometimes surpass benign reparatory processes or associate high-grade squamous precursor lesions, glandular neoplasia, including cervical adenocarcinoma, endometrial neoplasm and even extrauterine adenocarcinomas. Therefore, AGC needs special attention and aggressive diagnostic procedures.

Nevertheless, the most common viral infection of the reproductive tract, the human-papillomavirus (HPV) infection, shouldn't be underestimated, as about 30% of AGC cases are HPV-positive. The presence of HPV in AGC patients identifies a group at higher-risk for developing cervical neoplasia. Studies show that 70% of AGC-HPV-negative patients have no evidence of cervical cancer, and 76% of AGC-HPV-positive results may present glandular or squamous neoplasia.

Methods: This is a retrospective study to determine the value of the AGC Pap test category in detecting endocervical and endometrial pathology and the potential pitfalls of false positive diagnosis. It was performed in the University Emergency Hospital of Bucharest during March/2009 -- December/2013. The total number of presentations for cervical pathology was 14,219. The diagnosis of AGC was found in 58 cases (0.41%).

Results: The age range was 24 to 59y (median age 41). In 46 cases (79%) AGC was the only cytologic anomaly found. In 12 cases the AGC cytology was associated with squamous lesion: ASC-US (6 cases), LSL (1 case), ASC-H (1 case) and HSIL (4 cases). Most colposcopies (58%) were negative for lesions, some were nonsatisfactory (12%), 5 (8.6%) revealed polyps, 12 (20%) had squamous lesions; there was no colposcopic diagnosis of adenocarcinoma. Among the 58 cases of AGC 17 (29.3%) were HPV-positive. Follow-up histology in 42 cases revealed: cervical or endometrial hyperplasia, metaplasia or polyps, endocervical or endometrial adenocarcinoma, cervical squamous carcinoma, CIN 1/2/3, endocervical leiomyoma, herpetic infection, inflammation, endometrial atrophy, endometriosic ovarian cyst. There were 12 cases with negative pathology findings and 16 cases without biopsy.

Conclusion: There is a large panel of pathology, other than glandular, or no pathology at all, responsible for AGC cytology.

AGC encompasses endometrial glandular neoplasia in addition to cervical glandular neoplasia and squamous neoplasia and, less commonly, metastatic disease from more distant sites. There is an association between HPV infection and the gravity of endocervical lesions; patients who test positive should be carefully followed.

There is an association between age and diagnosis. Young patients are likely to have squamous lesions while older ones are likely to have glandular neoplasia.

P42
IRIS associated with tuberculosis of CNS in HIV and non-HIV infected patients: how long do we need to use steroids
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BMC Infectious Diseases 2014, 14(Suppl 7)P42

Background: Although the immune recovery associated with highly active antiretroviral therapy (HAART) in HIV infection has important clinical benefits, this restoration of immunity may result in deterioration, when HAART is initiated in patients with tuberculosis (TB). The immune reconstitution inflammatory syndrome (IRIS) has also been reported in non-HIV persons following anti-TB treatment (ATT). The incidence of IRIS in case-control studies on HIV and non-HIV-infected patients, has been found to be 28-36% and 7-10%, respectively, depending on background tuberculosis prevalence rates.

We report two cases illustrating IRIS in treated CNS TB, one in a patient diagnosed with HIV stage C3 and the second in a patient with immunosuppression due to anti-tumor necrosis factor alpha treatment.

Case report: A 40 year-patient, HIV-infected, was diagnosed with tuberculous meningencephalitis (CSF with 210 elements, lymphocytic predominance, protein of 2.1 g/L, glucose of 0.26 g/L, right hemiplegia and motor aphasia), due to Mycobacterium tuberculosis susceptible to all anti-TB agents. He initially improved under ATT, but one week after antiretroviral therapy (ART) was started, at 6 weeks after the initiation of
ATT, he presented with worsening of his symptoms (left hemiparesis and mixed aphasia), of CSF and MRI changes. He improved after he was started on corticosteroids (dexamethasone 24 mg/day initially, then tapered doses), but was readmitted with recurrence of the left hemiparesis and worsening aphasia, while reducing the steroid dose to 8 mg of methylprednisolone. Worsening of his neurological status has been reemerging each time we try to stop steroids over a 6-month period. The second case is a 60-year-old patient, with ankylosing spondylitis, treated for 3 years with infliximab, diagnosed with disseminated TB (miliary tuberculosis and pulmonary TB) histological and bacteriological confirmed. The initiation of ATT has led to neurological improvement, but after 3 weeks of therapy the patient presented with fever and diplopia. These symptoms improved only after corticosteroids administration (dexamethasone 16 mg/day initially, then tapered doses). At week 18 of ATT the patient was still on steroids.

Conclusion: High doses of steroids are usually used to control the IRIS symptoms in TB patients with CNS involvement, but the dosing and duration of corticosteroids should be personalized to each patient. Some patients may require extended courses of corticosteroids.

Malnutrition and associated factors in patients with infectious diseases
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BMC Infectious Diseases 2014, 14(Suppl 7):P43

Background: Worldwide, malnutrition affects 20-50% of patients admitted to hospitals. Malnutrition has a high impact in clinical outcomes and cost of healthcare. In Romania, there is a general lack of hospital malnutrition data, and also of malnutrition prevalence in infectious diseases hospitals.

Objective: to assess malnutrition risk and associated factors in hospitalized patients with infectious diseases.

Methods: Cross-sectional study that included all patients above 18 years old (207), consecutively admitted in the National Institute for Infectious Diseases "Prof. Dr. Matei Balș", Bucharest, during June 16 – July 16, 2014. Malnutrition risk was assessed by malnutrition universal screening tool (MUST) in the first 24 hours of admission and associated factors were collected from the clinical observation file. We compared the patients with high malnutrition risk (MUST ≥ 2) with patients without risk or moderate risk (MUST 0 and 1), regarding demographic features (gender, age) and severity of clinical status (number of pills, length of stay, number of previous hospitalizations). The quantitative variables were analyzed as central tendency and dispersion, and qualitative variables were analyzed as proportions. For comparison, we used the T-student test, Mann Whitney U test and Chi² test, as applicable.

Results: Malnutrition was diagnosed in 23% of patients according to MUST, 17% and 6% of them having high risk (MUST ≥ 2) and moderate risk (MUST 1), respectively. With respect to age, we observed a statistically significant difference between patients with high risk of malnutrition and patients with low risk (mean age 60±3.592 years vs. 49.99±19.736 years, p=0.007). Regarding the severity of clinical status, there was a statistically significant difference in the mean number of previous hospitalizations between patients with high risk and patients with low risk (1.81 vs. 1.19, p=0.003). Also, the patients with high risk had an average length of stay higher than patients with low risk (8.31 days vs. 6.91 days), statistically insignificant. The mean number of pills administered per day was higher in patients with high risk compared to patients with low risk (2.56 pills vs. 1.91 pills), statistically insignificant. 8.3% of patients with high risk of malnutrition and 6.4% of patients with low risk received more than 5 pills/day, statistically insignificant.

Conclusion: In our study, high risk of malnutrition was significantly associated with older age and number of previous hospitalizations. We need a larger study group to emphasize other variables significantly associated with high risk of malnutrition.

Multidrug resistance of uroraphogenic Escherichia coli strains isolated from diabetic patients
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Background: Urinary tract infections (UTI) in diabetic patients are due to certain pathogenic microorganisms, the most common being Escherichia coli. There can also be selected multiple bacterial strains resistant to antibiotics. There are several risk factors predisposing to infection in these patients, especially if glycemic control is poor.

Methods: This study conducted for one year included patients with type 1 and 2 diabetes hospitalized in the clinic for diabetes, nutrition and metabolic diseases in the Emergency County Hospital of Craiova, with or without symptoms of UTI. To make a distinction between contamination and true infection is important which method is used for this purpose. We used the midstream urine collection, especially in females. From these samples collected we have determined in vitro and have tested resistance to antibiotics of Escherichia coli strains isolated.

Results: Analyzing the degree of multidrug resistance of Escherichia coli strains isolated from urine samples, related to ciprofloxacin resistance, we observed that of the 97 strains studied from diabetic patients hospitalized in the clinic for diabetes, nutrition and metabolic diseases, 11 strains showed different degrees of multidrug resistance representing a percentage of 11.34. Multidrug resistance includes strains resistant to 2 to 7 antibiotics. Among the 11 strains studied, 9 had intermediate susceptibility to 2 to 6 antibiotics.

Conclusion: The number of multidrug resistant Escherichia coli strains compared to ciprofloxacin resistance was relatively low. Inappropriate use of antibiotics creates multidrug resistance. Meropenem remains a reserve antibiotic for multidrug resistant Escherichia coli strains, because all tested strains were susceptible. Drug resistance surveillance must be done periodically and it can be informative for appropriate management of antimicrobial resistance and for adequate and effective treatment.

Mystifying lesions in syphilis-HIV co-infection
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BMC Infectious Diseases 2014, 14(Suppl 7):P45

Background: Syphilis-HIV co-infection is common in seropositive patients and it is important to screen for both diseases, especially in patients with behavioral risk.

Case report: We report the case of a 22 years old male patient, who presented with a vesicular eruption, bacterial over infected, with a group pattern distribution throughout the entire skin, evolving for approximately three months. The patient was previously treated for this condition with systemic antibiotics, which he could not mention, being diagnosed with superficial folliculitis. However, no improvement was noticed. He denied unprotected sexual intercourse. The patient was clinically examined and we performed routine tests, immunologic assays, bacteriological swab and skin biopsy.

General examination showed generalized, painless micropolylymphadenopathy and continuous muscle pain in the lower legs. Dermatological assessment of lesions revealed a disseminated erosion on the entire skin, including the face and penis sheath, consisting of erythematous plaques with the surface covered by crusts and vesicles arranged in groups, with various sizes (diameter 1-3 cm) and clearly defined edges. The presumptive diagnosis was secondary syphilis, and in order to rule out the differential diagnosis of pityriasis lichenoides et variioliforms acuta, eosinophilic folliculitis and systemic lupus erythematosus we performed a series of tests including immunologic assays, viral markers for HCV, serology for syphilis, bacteriological swab
from the lesions and a skin biopsy. The results were positive for syphilis and \textit{Staphylococcus aureus} was isolated from the lesions. Histopathological appearance of psoriasisform and lichenoid dermatitis with plasma cells was interpreted in the context of secondary syphilis, confirming our diagnosis. The patient eventually admitted having multiple unprotected sexual contacts. We tested for HIV Ag/Ac (1+2), which was positive.

**Conclusion:** The patient was treated for syphilis in our department and he was referred to the infectious diseases hospital for proper evaluation and treatment for HIV infection. The particularity of the case consists in the uncommon aspect of the eruption in this HIV-syphilis co-infection.

**Consent:** Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

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**P46**

Dermatological manifestations common in hospitalized HIV patients

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**Background:** The aim of the study was to establish the most common dermatological manifestations in HIV hospitalized patients and to correlate the status of cutaneous diseases in relation with the CD4 cell count.

**Methods:** During 01.12.2013-28.02.2014, 134 HIV-positive subjects admitted to the hospital were enrolled, registering demographic data (age, gender, socioeconomic and educational status), transmission route, WHO clinical stage of HIV, laboratory parameters (CD4 count, viral load) and HIV treatment regimen. All patients were screened for cutaneous diseases by a dermatologist.

**Results:** Out of total of 134 HIV-positive patients, 41 patients had cutaneous manifestations. 28 were male (68.29%) and 13 female (31.70%). Most patients were in the age group 16-30 years (58.53%). The majority of patients belonged to the urban area (65.85%) and had a low educational and socioeconomic status (only 56.09% patients graduated secondary school; 82.92% of the patients were unemployed).

The prevailing route of transmission was parenteral (41.46%), most patients had stage C3 HIV disease (56.09%), and only 24.39% of patients had undetectable viral load. Most patients were undergoing ARV regimen (80.48%), 12.19% were naive and 7.31% had ceased therapy. 17 patients had 2 concomitant dermatological manifestations (41.46%), while 13 were treated for only one skin disease (31.70%). 19.51% patients were diagnosed with 3 concurrent dermatological diseases and 7.31% with 4 simultaneous skin disorders. The most common HIV-related dermatological manifestations were: oral candidiasis (78.04%), seborrheic dermatitis (14.63%), lipodystrophy (12.19%), tinea corporis (7.31%), herpes zoster (4.87%), syphilis (4.87%) and cellullitis (4.87%). CD4 counts ranged between 2-1551 cells/µL, with a mean CD4 of 139 cells/µL. Oral candidiasis was correlated with a mean CD4 count of 233 cells/µL. Oral candidiasis (78.04%), seborrheic dermatitis (14.63%) and cellulitus (4.87%) were more common in HIV patients associated morbilliform rash, mostly on the lumbosacral region. The neurological manifestations were dominated by dysmetria, tremor, nystagmus, walking disorders and balance disorders in 4 cases, one of which with opsclocus myoclonus syndrome (OMS), palsy in 3 cases and tonic-clonic generalized seizure in 1 case. The laboratory exams showed an increased number of white blood cells (WBC) with neutrophilia in 5 out of 7 cases, increased C reactive protein and fibrinogen in 3 patients. The CSF study showed a lowered number of elements (between 22 and 134 elements/cmm), elevated glycorrhachia in 6 cases, CSF proteins lower than 1 g/dL in 6 cases, nucleated cells – granulocytes 25-56% in 5 cases. The imagistic studies presented specific modifications for acute ischemic stroke in 2 cases. The patient with OMS had an unfavorable evolution during the treatment.

**Conclusion:** The neuro-infections caused by the West Nile virus had severe clinical manifestations, dominated by cerebellum ataxia and palsy.

The CSF study presented an increased number of granulocytes that can induce problems regarding the differential diagnoses with bacterial meningitis decapitated by antibiotics or with bacillary meningitis.

**Hyperglycorrhachia** was associated also in patients with normal values of glucose. OMS associated with the West Nile virus infection is described, in literature, only in a few cases.

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**P48**

Non hepatitis jaundice - adverse reaction to rifampicin

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**BMC Infectious Diseases** 2014, 14(Suppl 7):P48

**Background:** The hoped placed in the new treatment regimens for tuberculosis (TB), with the emergence of rifampicin were partially shaded by the side effects which were frequently recorded, able to impose temporary or definitive abandonment of this tuberculosis.

**Case report:** The patient to be presented illustrates relapse of TB infection, in the context of significant comorbidities: chronic renal failure, uramic stage, in chronic hemodialysis program; primary hyperuricemia with urate nephropathy; stage II arterial hypertension with very high cardiovascular risk.

In the absence of clinical, definite biological and morphological criteria, the diagnosis of drug hepatopathy relies predominantly on causal relationship between the drug administration and the occurrence of the therapeutic accident. Non-hepatitis jaundice (liver tests normal) occurred after 2 weeks of daily tuberculosis treatment, suggesting the involvement of rifampicin in the conjugation of bilirubin and conjugated bilirubin excretion in the bile. The peculiarity of the case: In the patient presented, the fulminant mechanism behind the cholestasis syndrome consisted of: compromising the active transport of bilirubin through the liver cell, without presenting the reflux of bile constituents (e.g., bile acids) in the circulation.

**Conclusion:** Adverse reactions to drugs due to their frequency and harmfulness have opened a new nosology chapter in modern medicine. Adverse effects of tuberculostatic drugs affect in a negative way both the management and the dynamics of TB infection.
Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

P49

**Osteomyelitis of the jaw treated with gentamicin slow releasing beads – a Case report**

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**BMC Infectious Diseases 2014, 14(Suppl 7):P49**

**Background:** Osteomyelitis is the infection of the bone. The local infectious process can begin as a consequence of a direct injury to the bone with direct insinuation or spreading from nearby tissues. The most common bacteria involved is Staphylococcus aureus. Regardless of the way the bone is infected, the end result is the same, with the development of an acute response with fever, pain, pus formation, swelling and if the mandibular bone is affected a neurological complication with anesthesia can occur. The aim of this case report is to present a complementary local treatment and its clinical outcomes.

**Case report:** We present the case of a male patient with mandibular osteomyelitis treated with radical surgical debridement and slow releasing gentamicin beads. The therapy had a good outcome with bone healing after 30 days and no signs of infection. The patient underwent a second surgery after 2 years for the removal of the beads, which were found to be fully integrated in the newly formed bone.

**Conclusion:** The treatment for osteomyelitis can be sometimes very inconvenient for the patient, as the treatment usually includes hospitalization with surgical intervention and intravenous antibiotics. The use of local slow releasing gentamicin beads is a complementary and not alternative treatment. We achieved good results with this technique that lead to bone healing with the full integration of the beads.

P50

**Non-invasive assessment of liver fibrosis through FibroMeter in patients with chronic viral hepatitis B and C**

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**Background:** Since the advent of non-invasive methods for liver fibrosis assessment, liver biopsy has been increasingly replaced with liver stiffness measurements or with computed scores based on serum biomarkers, particularly for monitoring viral infections such as HBV [1] or HCV [2,3].

**Methods:** We performed a screening study using FibroMeter (Echosens, Paris) to determine the stage of fibrosis and the necroinflammatory status of a cohort in patients with chronic HBV and HCV infection under surveillance in a tertiary care hospital in Bucharest, Romania.

**Results:** We analyzed data from 87 patients, 68 (78.2%) of which had chronic HBV infection and 19 (21.8%) had chronic HCV infection. The median age was 44.9±15.0 (range 17-75). The mean body mass index (BMI) was 26.0±3.6 in the HBV group and 26.7±3.2 in the HCV group. Overall, 36 patients (41.4%) had normal BMI, another 36 (41.4%) had a BMI equivalent for overweight status, and 15 (17.2%) had grade I obesity.

**Conclusion:** The patients included in this study had varied ages and characteristics. FibroMeter classified most of them as F1-F2 but descriptive data should be interpreted in clinical context and potential confounding factors should be identified on a case-by-case basis.

**References**


P51

**Oxidative lesions of DNA in membranous glomerulonephritis associated with the infection with hepatitis B virus**

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**BMC Infectious Diseases 2014, 14(Suppl 7):P51**

**Background:** The kidneys are known as a target of hepatitis viruses. The renal impairment associated with hepatitis B virus (HBV) could be represented by lesions of glomeruli, or by injury of the renal tubules. Membranous nephropathy is the most common form of glomerulonephritis associated with HBV infection. We aimed to develop a prospective study that evaluated the relation between serum levels of 8-hydroxy-2-deoxiguanosine (8OHdG) and total antioxidant status (TAS) in patients with membranous glomerulopathy associated with HBV infection.

**Material and Methods:** The study included a group of 18 patients with chronic infection with HBV and membranous nephropathy with nephrotic syndrome, without renal failure (eGFR >60 ml/min/1.73m²), and a group of 20 patients with chronic infection with HBV without membranous glomerulonephritis. The patients did not receive any treatment for the mentioned diseases before the inclusion in the study. The groups were similar for demographic and nutritional status characteristics. The assessment of 8OHdG, a metabolite of oxidative damage of DNA, was made by ELISA method. TAS was determined by spectrophotometric method.

**Results:** In patients with chronic HBV infection and membranous nephropathy, 8OHdG (ng/mL serum) had higher levels than in patients with chronic HBV infection without renal disease (14.31±4.73 versus 8.11 ±2.66, p<0.05). Serum levels of TAS (mmol/L serum) were significantly lower in patients with membranous glomerulopathy compared with those without nephropathy (0.82±0.37, versus 1.01±0.31, p<0.05). A statistically strong negative correlation was determined between 8OHdG and TAS in patients with membranous glomerulopathy associated with HBV infection.

**Conclusion:** The negative association between serum levels of 8OHdG and TAS in patients with membranous nephropathy induced by HBV infection suggests an important role of oxidative stress in the development of renal diseases. The adjustment of imbalance between levels of reactive oxygen/nitrogen species and those of antioxidants in the human body could represent a goal for a better management of renal diseases.

P52

**Parapneumonic pleurisy in patients with community bacterial pneumonia**

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**BMC Infectious Diseases 2014, 14(Suppl 7):P52**

**Conclusion:** The patients included in this study had varied ages and characteristics. FibroMeter classified most of them as F1-F2 but descriptive data should be interpreted in clinical context and potential confounding factors should be identified on a case-by-case basis.
**Background:** Parapneumonic pleurisy has a variable incidence on patients with community bacterial pneumonia, worsening the disease evolution. The purpose of the study is to emphasize the frequency of parapneumonic pleurisy occurrence correlated with some contributing factors.

**Methods:** A retrospective study has been performed on a group of 87 patients with community bacterial pneumonia (average age of 49.7 years, M/F proportion, FINE seriousness score of 72-127). The diagnosis has been established clinically, radiologically, and through complex bacteriological and serological examinations.

**Results:** The parapneumonic pleurisy has been diagnosed during the first days after onset (1-5 days) in 64 of the patients, for the rest after 6-7 days of evolution. Bacteriological tests identified *Streptococcus pneumoniae* from sputum in 12 cases, *Haemophilus influenzae* in 2 cases. Eight patients have been found with high titer IgG antibodies for *Chlamydia pneumoniae* and 2 cases with IgM antibodies for *Chlamydia pneumoniae*. The virulence of the bacterial bases has been similar on the patients with and without parapneumonic pleurisy. The contributing and aggravating factors were the smoking in 68% of cases, diabetes mellitus in 47%, hypo-proteinemia in 23%, cardiac failure in 2%, ischemic heart in 1.5% of patients.

**Conclusion:** The parapneumonic pleurisy is both an aggravating factor and a severity indicator for the evolution of community acquired pneumonia. The occurrence of parapneumonic pleurisy is encouraged by the metabolic and physical disorder provoked by smoking and the related co-morbidities.

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**P53**

Plasma zinc level during acute gastroenteritis
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**Background:** Gastroenteritis may result in loss of zinc by feces, decreased tissue levels of zinc and negative zinc balance in children.

**Methods:** The first aim of the study was to determine the plasma zinc level on admission in the hospital and 10 days after the recovery from acute gastroenteritis, in children aged 0-3 years, from the region of Bihor, Romania. Second aim of the study was to analyze the plasma zinc level according to the etiology of gastroenteritis. Zinc sulfate (10-20 mg daily, according to age) was given to the patients in the study group, for 10 days. The colorimetric method with Br-PAPS final point (CV% 0.98%-4.64%) was used for the determination of the zinc level. The program IBM SPSS statistics version 22 was used for analysis of the data.

**Results:** During three years (2009-2011), 103 children with acute gastroenteritis were enrolled in the study. The mean plasma zinc level in the 10th day versus day 0, increased in the study group (n=53) (14.59 ±2.55 μmol/L versus 15.66±3.98 μmol/L, p=0.049, Student’s test) and decreased in the control group (n=50) (15.08±3.28 μmol/L versus 13.59±3.02 μmol/L, p=0.041, Student’s test). In the day 0, there were no significant differences between plasma zinc level in children with bacterial gastroenteritis compared with viral gastroenteritis (13.97±2.52 μmol/L versus 14.08±2.19 μmol/L, p=0.911, Student’s t test).

**Conclusion:** Plasma zinc level decreased after 10 days of acute gastroenteritis. The etiologic agent of diarrhea did not influence the plasma level of zinc.

**Acknowledgement:** This study was supported by own sources.

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**P54**

Performance of shear-waves elastography in the non-invasive assessment of thyroid stiffness in patients with viral hepatitis
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**Background:** In chronic HCV infection, high rates of viral replication are often associated with progressive liver fibrosis. As HCV has also been shown to replicate in other organs, such as the thyroid [1], we have performed a pilot study to assess thyroid stiffness through non-invasive elastography.

**Methods:** One trained operator performed shear-waves elastography (SWE) of the liver and thyroid in patients with chronic HCV infection, using Aixplorer (SuperSonic Imagine, Aix-en-Provence, France).

**Results:** We assessed 21 patients with chronic HCV infection, with a male-to-female ratio of 0.6:1. The mean age was 51.4±11.9 years. The mean duration of HCV infection was 5.2±5.5 years (range: 0-20 years). The predominant HCV genotype was 1b (in 16 patients – data not available for 5 patients), and the predominant IL28-B genotype was CT (9 patients), followed by TT (7 patients) and CC (3 patients) – IL28-B data were not available for 2 patients. Most (17, 81.0%) of the patients had received prior anti-HCV therapy with peg-interferon-ribavirin (PR) or direct-acting antivirals (DAA)-based treatment, and 13 of them displayed SVR (12 with DAA-based therapy and one with PR – the patient had an IL28-B genotype CC), while 4 displayed non-response to PR (IL28-B genotypes CT and TT).

Eight of the patients (38.1%) had a previously diagnosed thyroid dysfunction, and 4 of them (19.0%) were under thyroid substitution treatment at the time of evaluation. Five of the patients (23.8%) presented thyroid nodules on ultrasound examination. The mean liver SWE was 9.6±4.2 kPa and the mean thyroid SWE was 25.1±10.4 kPa overall, and 26.2±11.3 kPa for the left thyroid lobe and 24.7±13.0 kPa for the right thyroid lobe.

**Conclusion:** This pilot study warrants further dynamic assessment of liver and thyroid stiffness in patients with chronic HCV infection, on larger study groups. To our knowledge, this is the first such study on thyroid stiffness in HCV-infected patients.

**Acknowledgement:** This paper is partially supported by the Sectoral Operational Programme Human Resources Development (SOP HRD), financed from the European Social Fund and by the Romanian Government under the contract numbers POSDRU/159/1.5/S/137390.

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**P55**

Predictive factors of response to interferon in chronic HBV hepatitis
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**Background:** It is well known that the virological response after pegylated interferon (INF) treatment in chronic HBV hepatitis is less than 50%. The main advantage of INF is the finite duration of therapy. A response guided therapy in this situation would be very important in order to recognize earlier the patients with poor response. Unfortunately, Romanian guidelines for HBV hepatitis treatment do not include a response guided therapy and INF-based regimens are recommended for one year. Objective: To analyze the factors correlated with the virological response to INF in chronic HBV hepatitis.

**Methods:** We made a retrospective analysis of the HBV chronically infected patients treated with INF, monitored in Third Department of Matei Bals Institute. Patients were divided in two groups: group 1, with virological response and group 2, without virological response. The virological response to INF is defined as viral load <2000 IU/mL after one year of follow-up (according to EASL guideline). The inclusion criteria in our study: HBV infected patients treated one year with INF who have finished the therapy for more than one year.
Results: Fifty-six patients met the inclusion criteria. 23 patients achieved multiple nodules, heterogeneous ions, urinary tuberculosis was infection, presented 10 days after In our country tuberculosis is a real public health problem, C. difficile Written informed consent was obtained from the patient for Clostridium Infectious Diseases Oradea after 98 patients were admitted with documented CDAD, mean age RR=2.18 (1.21;3.94). The rate of positive HBeAg was 14(Suppl 7): and duration over 7 days correlated 14(Suppl 7): 1 and any accompanying images. A copy 2 associated disease in 14(Suppl 7): Clostridium difficile Yersinia and any accompanying images. A copy in infection Salmonella Reactive arthritis, Reiter Mycoplasma pneumoniae nti with fever especially at night, a is recognized as a major cause of Ureaplasma urealyticum Cozmina Andrei

P56 Prevalence of risk factors for Clostridium difficile associated disease in Galati
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Background: Clostridium difficile is recognized as a major cause of nosocomial gastroenteritis with an unexpected high prevalence in the present year. Different risk factors such as previous antibiotic therapy, old age, abdominal surgery or previous proton pump inhibitors (PPI) treatment were associated with the emergence of Clostridium difficile associated disease (CDAD).

Methods: Retrospective study based on medical records of patients with CDAD admitted in our hospital between June 2013 - June 2014. Diagnosis was based on clinical signs of gastroenteritis, fever and presence of C. difficile toxins A/B in stool (Vidas bioMerieux). Previous antibiotic treatment and duration, previous hospital exposure, abdominal surgery and PPI treatment, age and gender were considered. Statistical analysis: MedCalc.

Results: 98 patients were admitted with documented CDAD, mean age 68 (27-92) the majority 88% (86/98) were over 60 years old, 36% (35/98) men, 64% (63/98) women, 63% (62/98) were from urban area. 80% (78/ 98) of patients were hospitalized prior CDAD, 59% (58/98) had previous antibiotic treatment and 27.5% (27/98) had abdominal surgery. Mean hospitalization was 8.9 days (1-17) and duration over 7 days correlated with the surprisingly association of PPI in the first 3 days to vancomycin treatment (p=0.001 95% CI 21.5-32.9). The association of prior antibiotic treatment and abdominal surgery had a statistical relevance for CDAD (p=0.0349). Age over 60 years old was found to be a risk factor (p=0.0001) but no difference by gender was found (p=0.5300). No association of CDAD and urban or rural area was found.

Conclusion: Our study confirmed the literature data regarding the risk factors of CDAD. Age over 60 year old, prior antibiotic treatment and abdominal surgery were found to be the risk factors for CDAD in our patients. Gender was not found to be a risk factor. Although we could not establish if prior PPI treatment was taken, the association of proton pump inhibitors to current vancomycin treatment was found to be a risk factor for longer hospitalization.

P57 Prolonged febrile syndrome. What could we find?
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Background: Often a patient with prolonged fever requires a complex medical approach involving several medical specialties and extensive laboratory investigations.
Case report: We report the case of a 32 year male who presented for prolonged febrile syndrome about 2 months, chills and discreet urinary symptoms, initially interpreted to be a chronic prostatitis and treated for about 40 days with fluoroquinolones. His medical history included myasthenia gravis with immunosuppressive treatment and thymectomy. Physical examination revealed patient with fever especially at night, a tumor of 10/5 cm in the right coxofemoral joint region, right testicular swelling, difficulty in urinating. The biological findings showed lymphopenia, CD4=64 cells/cmm, a marker of sepsis positive, incomplete cholestatic syndrome, urinalysis with leukocytes and erythrocytes, negative urine culture, blood cultures were negative. Genitourinary ultrasound and urography were performed, which found enlarged epididymis with multiple nodules, heterogeneous prostate. Polymerase chain reaction from urinary sediment was positive for Mycobacterium tuberculosis. Given the results of the investigations, urinary tuberculosis was suspected and anti-tuberculous (TB) treatment was initiated while waiting for the culture results. Patient's clinical status worsened, with the persistence of fever and chills, and the increase of tumor growth in the right coxofemoral joint region. The soft tissue ultrasound showed fluid collection along the psoas muscle straight to the scrotal region. Following surgery the fluid collection from right coxofemoral joint region was drained while the patient continued TB therapy with fever remission.

Conclusion: In our country tuberculosis is a real public health problem, especially in immunocompromised patients. In literature, extrapulmonary tuberculosis such as genitourinary TB is noted as the second most common form of extrapulmonary TB in countries with increased incidence of tuberculosis. However there are no multicenter studies with a high level of evidence on this problem.

Consent: Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

P58 Reiter’s syndrome following Salmonella infection
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Background: Reactive arthritis, Reiter’s syndrome is one of the seronegative arthropathies, that can be associated with intestinal infections (Shigella, Salmonella, Yersinia, Campylobacter jejuni, Clostridium difficile), sexual infections (Chlamydia trachomatis, Ureaplasma urealyticum) and lung infections (Chlamydia pneumoniae, Mycoplasma pneumoniae). Reiter’s syndrome is an arthritis that occurs 1-4 weeks in response to an infection with a specific organism with urogenital or enteral gate, especially in HLA-B27 positive individuals.

Case report: We present the case of a patient of 34 years, from a family outbreak of food-borne Salmonella infection, presented 10 days after discharge from the Department of Infectious Diseases Oradea after treatment with ampicillin 4 g/day and ciprofloxacin 1 g/day, with a fever, swelling of the right ankle and left knee, accompanied by secondary functional impotence at this level and conjunctivitis. Biological: inflammatory syndrome, minimum elevated liver enzymes, negative rheumatoid factor, normal joint radiography, HLA B 27 positive; abdominal CT showed retroperitoneal inflammatory lymphpadenopathy. Under antibiotic therapy, corticosteroid, anti-inflammatory and hepatoprotectives, evolution was undulating, with three episodes of relapses within 6 months.

Conclusion: Antibiotic treatment during both acute infection and Reiter’s syndrome shortened the evolution period in this case.

Consent: Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.
**PS9**

Resistance profile of *Staphylococcus aureus* strains isolated from patients treated in a tertiary care hospital in Romania

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BMC Infectious Diseases 2014, 14(Suppl 7):PS9

**Background:** The prevalence of colonization with *S. aureus* is a major issue in clinical practice, but studies describing the local antimicrobial susceptibility patterns of important pathogens can aid in guiding first-line antibiotic therapy.

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**References:**

**P60**

Sepsis may dissimulate a lymphoma? Case report

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BMC Infectious Diseases 2014, 14(Suppl 7):P60

**Background:** In aggressive lymphoma, systemic “B” symptoms of fatigue, fever, night sweats may occur frequently, but these symptoms may occur also in severe sepsis. Many hematological disorders, especially lymphoid neoplasms, have a high risk for infection because of altered humoral and cell-mediated immunity.

**Case report:** We present a case of a man 37 years old who was diagnosed in our clinic on July 2014 with diffuse large B-cell lymphoma. On July 5 the patient was admitted to the County Hospital Pitești with fatigue, fever, night sweats and epigastric pain. Laboratory evaluation remarks a severe pancytopenia but without inflammation marks and a positive procalcitonin.

Marrow aspiration sample showed 28% lymphoid cells. The patient was transferred in our clinic with the diagnosis of sepsis. From family history we remark that his mother had died a few years back at 50 years old with acute leukemia. After clinical exam (pallor, splenomegaly), laboratory evaluation (severe pancytopenia: leucocytes 0.88x10^9/L, neutrophils 0.49x10^9/L, Hb 9.5 g/dL, platelets 25x10^7/µL, LDH 1,704 IU/L, prothrombin time 16.5 s, fibrinogen 46 mg/dL, partial thromboplastin time 56.9 s, procalcitonin 3.95 ng/mL, abdominal CT scan, we considered intra-abdominal sepsis and disseminated intravascular coagulation (DIC). Treatment for 7 days with meronem 3g/day, corticotherapy and supportive therapy, fresh frozen plasma, packed red blood cells, platelet concentrates did not ameliorate the clinical status and surgery exam disproved our suspicion. Because procalcitonin rose to 10,35 ng/mL treatment was completed with vancomycin 2g/day, caspofungin 50 mg/day, levofloxacin 1g/day, amikacin 1g/day and ethambutol 1g/day and also we performed a bone marrow biopsy.

After 5 days procalcitonin was 1.57 ng/mL and the clinical status was ameliorated but pancytopenia persisted. The histopathological exam and the immunohistochemistry aspect sustained the diagnosis of diffuse large B-cell lymphoma and the patient was transferred to the Hematology Clinic.

**Conclusion:** In patients with severe infection who have a long evolution we must search for a hematological disease. Sometimes both hematological disease and sepsis may intertwine, being difficult to make a plain distinction.

**Consent:** Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

**P61**

Screening for cardio-metabolic risk factors in the Romanian cohort of HIV-positive patients

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**Background:** HIV is recognized as an independent factor related to cardiovascular (CV) disease [1]. International guidelines recommend evaluation and adjustment of common cardiovascular risk factors for all HIV-positive patients. As antiretroviral (ARV) drugs associate different profiles regarding the CV risk [2], the therapeutic regimens need to be managed on a case-by-case basis [3,4]. The prevalence of CV disease appears to be higher in the HIV population, compared to the general population, and recent studies have demonstrated that the supplementary risk for acute myocardial infarction in HIV-infected patients is 75% [5].

**Methods:** We are currently performing a screening study in a cohort of HIV-infected patients to assess cardiovascular and metabolic involvement, through means of: echocardiography, intima-media thickness, Framingham score, serum lipid profile, DXA evaluation, as well as immune and virological evaluation.

**Results:** We present the results from a pilot project that included 100 patients from the Romanian HIV cohort. We evaluated 100 patients, with a mean age of 39.8 years old. The male-to-female ratio was 1.7:1. The mean CD4 count was 668 cells/µm, with 5% of patients presenting CD4 cell counts below 200, 29% between 200-500 and 66% above 500 cells/µm. The distribution of HIV-RNA was: undetectable (51%), detectable, below 1,000 copies/mL (39%), 1,000-10,000 (4%) and above 10,000 (6%). Upon serum evaluation, 49% of patients had normal cholesterol levels (below 200 mg/dL), 44% had normal triglyceride values (below 150 mg/dL), and 69% had normal glycemic values.
Conclusion: These preliminary results warrant the continuation of this pilot study, with inclusion of a higher number of patients, in order to reach the project-specified target of enrollment.

Acknowledgements: 1) Cardio-metabolic project – Merck Sharp & Dohme.

References

P62 Severe sepsis with Stevens-Johnson syndrome caused by Mycoplasma pneumoniae – case presentation
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BMC Infectious Diseases 2014, 14(Suppl 7):P62

Background: Mycoplasma pneumoniae is widely known as the etiological agent of “atypical pneumonia”, the most common clinical aspects of the infection being bronchiolitis and acute tracheobronchitis. It can also determine extra-pulmonary manifestation such as ear, nose and throat infections, neurological, cardiac or dermatological manifestations. Dermatological involvement is second most common, after respiratory infections, and it can vary from urticaria-like rashes to Stevens-Johnson syndrome. Stevens-Johnson syndrome is severe form of immune-complex–mediated hypersensitivity complex characterized by a hallmark of skin lesions spanning from mild forms to extensive involvement of skin and mucosa. It can be caused by a viral or bacterial infection or it can be drug induced.

Case report: We present the case of an 8 year old male patient admitted in the Intensive Care Unit of the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” with the suspicion of Stevens-Johnson syndrome. The patient’s personal history revealed that he had numerous episodes of upper or lower respiratory infections, all treated with antibiotics, and 2 episodes of ulcerative stomatitis and bullous pemphigus. The onset of the current episode was 6 days prior to admittance in our clinic with symptoms consistent with an upper respiratory infection for which his family doctor prescribed an antibiotic, under which his general state did not improve. After 4 days, the patient presented a generalized bullous eruption with consequent mucosal involvement.

Positive diagnosis was established through classic clinical and laboratory criteria and confirmed by serological methods which identified Mycoplasma pneumoniae. We have monitored the clinical and biological evolution under treatment. Evolution was slow but favorable, with limitation of cutaneous and mucous lesions and remission of respiratory symptoms.

Conclusion: In this particular case, we considered two different factors concerning etiology: Mycoplasma pneumoniae and the administration of beta-lactam antibiotics, which could also have been the causative agent. Acute onset with respiratory symptoms was suggestive of an infectious etiology but, taking into consideration the patient’s previous allergic reactions and the onset after administration of beta-lactam antibiotics, we recommended precaution in case of future antibiotic treatments.

Consent: Written informed consent was obtained from the parents for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

P63 Sinogenic intracranial complications in children - cases report
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BMC Infectious Diseases 2014, 14(Suppl 7):P63

Background: Although uncommon, intracranial supplicative complication of sinusitis in children can occur. The progressive pneumatization of the sinuses after birth and the late appearance of the sphenoid and frontal sinuses explain the predilection for intracranial sinogenic complications in older children and adolescents. Early imaging is crucial to diagnosis and brain MRI is the most useful test. Medical therapy combined with neurosurgical and otolaryngological surgical intervention may improve outcome and reduce the neurological sequelae.

Case report: We present the cases of 2 girls admitted in the ICU of the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” with the diagnosis: pansinusitis and intracranial supplicative complications.

The first girl: C.M.L., 14 years old, was admitted for fever, headache, vomiting and facial palsy. Clinically she evolved with rapid neurological deterioration, focal seizures, hemiparesis and then convulsive status. Brain MRI was suggestive for left brain abscess, subdural empyma and pansinusitis. With neurosurgical intervention and antibiotic therapy, the evolution was favorable, with full neurological recovery.

The second girl, V.E.S., 12 years old, was admitted in our hospital for frontal headache, fever, right palpebral edema, nausea and vomiting. In evolution she presented neurological complication with crural palsy and focal seizures. Brain MRI showed inter-hemispheric subdural empyma and supplicative pansinusitis. Otolaryngological surgical intervention and antibiotic therapy was administered, with favorable outcome, with no sequelae.

Conclusion: Both girls had a good outcome but devastating short term and long term sequelae may occur without an early diagnosis and appropriate treatment. Brain MRI remains the gold standard for diagnosing any sinogenic intracranial complications. Both surgical and antibiotic treatment are essential for favorable evolution of supplicative intracranial complication in sinusitis.

Consent: Written informed consent was obtained from the parents for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

P64 Species of anaerobic Gram-negative bacilli involved in abscesses localized in the fascial spaces of the head and neck
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BMC Infectious Diseases 2014, 14(Suppl 7):P64

Background: In general, the oro-maxillo-facial infections, including the abscesses in the head and neck spaces, are mixed infections, involving anaerobic bacteria in association with facultative anaerobic microorganisms, with the predominance of the first ones. Since most anaerobes are fastidious bacteria, their isolation and identification are not routinely performed by the clinical laboratory, being considered too time-consuming. The aim of this study was to identify at species level a collection of 44 anaerobic Gram-negative bacilli strains (isolated from pus samples collected from patients with abscesses in the spaces of the head and neck presented to the Clinical Hospital of Oro-Maxillo-Facial Surgery - Bucharest, during 2011-2012), stored in ultrafreezer at the laboratory of Microbiology Chair of the Faculty of Dentistry, University of Medicine and Pharmacy “Carol Davila” - Bucharest.

Methods: The 44 strains were presumptively identified at genus level by the conventional diagnostic methods, based on: colony morphology (pigmentation and fluorescence), bile sensitivity test and sensitivity to
special-potency antibiotic disks (erythromycin, rifampicin, colistin sulphate, penicillin G, kanamycin and vancomycin), tested by using the MAST ID MID8 ANAEROBE ID RING (MAST Group Ltd., UK). Identification at the species level was done by the Rapid ID 32 A system (BioMérieux, France).

Results: The anaerobic Gram-negative bacilli strains investigated in this study were included either in Prevotella or Fusobacterium genus. A number of 33 isolates were identified as Prevotella and belonged to the following species: P. melaninog enica - 13 strains, P. oralis - 7 strains, P. intermedia - 5 strains, P. buccae - 5 strains and P. denticola - 3 strains. The rest of the isolates were identified as Fusobacterium nucleatum.

Conclusion: The Prevotella species represented two-thirds of all anaerobic Gram-negative rods isolates. The predominant species was and was closely followed by F. nucleatum. The identification at species level of the clinically significant isolates from oro-maxillo-facial infections might be important for further investigation on the host-pathogen interactions.

P65 Screening for osteo-renal involvement in the Romanian HIV cohort
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BMC Infectious Diseases 2014, 14(Suppl 7):P65

Background: When assessing comorbidities in HIV-infected patients, the bone and the kidney represent important target organs that can potentially be affected by both virus and antivirals. Given the particular characteristics of the Romanian HIV cohort [1], most of the patients have experienced HIV infection in childhood and have received multiple therapeutic regimens since the advent of antiretroviral (ARV) therapy. Thus, the need to screen for osteo-renal impairment in these patients is high on the priority list [2].

Methods: We have started a project to evaluate key markers of kidney disease and assess the risk for fracture and kidney involvement in the Romanian cohort of HIV-infected patients.

Results: To date, 645 subjects have been enrolled, the group being representative for the whole country, being monitored in all the 9 regional HIV/AIDS reference centers in Romania. We present the descriptive data for this group of patients. The mean age was 24.3±2.4 years, with a median age at HIV diagnosis of 11 years old. The main transmission route for HIV infection was perinatal (75.33%), Vertical transmission accounted for 1.4% of cases, heterosexual contact for 6.05%, homosexual contact for 0.61% and in 16.59% of cases the transmission route could not be ascertained. The current median CD4 cell count was 488 cells/μl, with a median nadir CD4 cell count of 110 cells/μl. Most of the patients had received multiple ARV regimens over time: 50.85% over 3 regimens, 47.13% 1-3 regimens, and only 2.02% were ARV-naive.

Conclusion: In the following months we plan to complete the osteo-renal evaluation for the patients with the characteristics described above, and to develop a clinical algorithm for predicting, diagnosing and monitoring bone and kidney involvement in patients with chronic viral infections.

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P66 Susceptibility to ciprofloxacin of Escherichia coli strains isolated from patients with chronic kidney disease
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BMC Infectious Diseases 2014, 14(Suppl 7):P67

Background: Urinary tract infection (UTI) is frequently found in patients with renal failure and is associated with azotemia, reduced urinary flow and impaired urinary concentration.

Methods: This trial was conducted in the Nephrology Clinic, Emergency County Hospital Craiova, during a period of one year. It included uropathogenic Escherichia coli strains isolated from patients with chronic kidney disease. We followed the distribution of these strains according to the stage of kidney disease, age and sex of patients. Also we have tested the susceptibility to ciprofloxacin of these strains.

Results: According to the glomerular filtration rate and the stage of kidney disease, Escherichia coli was associated predominantly with stage five of chronic kidney disease (43.59% women and 12.82% men, with a total of 56.41%), which represents kidney failure (diabetes or kidney transplant patient required). Propionibacterium Escherichia coli urinary tract infection was significantly higher in patients over 65 years (41.03% women, 5.12% men and of 46.15% in this age group). Also the percentage of Escherichia coli strains collected from women (84.62%) was higher than men (15.38%). The results regarding the susceptibility to ciprofloxacin revealed the following values: 51.28% susceptibility (20 strains), 7.69% intermediate susceptibility (3 strains) and 41.03% resistance (16 strains).
The resistance was associated predominantly with stage five of chronic kidney disease (23.08%, 9 strains respectively).

**Conclusion:** *Escherichia coli* urinary tract infections in patients with chronic kidney disease are prevalent in women and in patients over 65 years. *Escherichia coli* strains isolated from patients with chronic kidney disease have a significant level of resistance to ciprofloxacin (41.05%). The severity of *Escherichia coli* urinary tract infection and its poor outcome, with frequent recurrences, are influenced by multiple factors related to sex, age, comorbidities, multiple admissions and selected resistant strains to antibiotics.

**P68**

**Botulism in Bihor County during 2002-2014**

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**BMC Infectious Diseases 2014, 14(Supp 7):**P68

**Background:** Botulism is a food-borne disease caused by botulinum toxin produced by *Clostridium botulinum*, under anaerobic conditions. Toxin type B is responsible for producing the disease more often.

**Methods:** We conducted a retrospective study of cases of botulism admitted to the Infectious Diseases Department I and II in Oradea during 2001-2014, July. All patients in the study were diagnosed with food poisoning by *Clostridium botulinum*, the food most commonly involved being smoked pork bacon, homemade and untreated by heat. Diagnosis was based on case history data, clinical and toxicology identification (often late).

**Results:** During 2001-2014 (July) in Bihor County were confirmed 61 cases of botulism food, aged between 5 and 69 years, 57.37% were from rural areas. Homemade pork preparation was most often responsible for transmitting the disease, including the last three years. The highest incidence was in 2004, 2007 and 2012 (1.9 per 10,000 population). Generally sporadic cases were recorded and family outbreaks. In the last three years, there have been 1/3 of the total confirmed cases (20 cases) of botulism, one third of which were severe, but no deaths. Incubation was between 24 hours and 5 days, but some patients arrived at the hospital even after 7 or 14 days after the first symptoms, only 18 patients (35.29%) being hospitalized in the first week of illness. Admission to our department was in most cases by reference from other specialties - neurology and ophthalmology, but also neurosurgery, otolaryngology (2 cases), surgery (2 cases) and psychiatry (1 case). Specific therapy represented by serum specific antibotulinic (botulinum antitoxin) was administrated in 57 cases (93.44%), initially serum polyvalent A, B, E, and in recent years the serum antibotulinic - type F 10,000 i.u./f, B 5000 i.u./f and type E 10,000 i.u./f. Routinely we administered 1 or 2 ampoules/im or iv after preliminary testing and desensitization. In all cases we administered iv ampicillin and metronidazole orally.

**Conclusion:** Specific treatment contributed to the favorable development of the disease, but specific serum unavailability this year, may cause development of other cases.

**P69**

**The aesthetic surgical management of a submandibular fascial space infection of odontogenic origin**

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**BMC Infectious Diseases 2014, 14(Supp 7):**P69

**Background:** Odontogenic infections are common complications in dental practice and can sometimes spread through the cervical fascia and cause abscesses of the deep fascial spaces. Some of these abscesses can be life-threatening. Early diagnosis of these deep fascial abscesses and aggressive antimicrobial and surgical treatment with extensive drainage are of utmost importance. The aim of this presentation is to show the clinical characteristics of a submandibular fascial space abscess and its aesthetic, minimally-invasive surgical management.

**Case report:** We present two cases of submandibular space abscesses that underwent surgical treatment using an esthetic incision with a through-and-through suction drainage of the pus collection, unidirectional lavage and intravenous antibiotics. This technique is best suited for young patients with esthetic requirements and with abscesses located in only one fascial space. However, using the esthetic approach, one must follow the same principles of the surgical treatment as for the classical incision: complete evacuation of pus, creating and maintaining a good post-surgical drainage. If these principles cannot be accomplished, classical incision must be considered.

**Conclusion:** Because of the anatomical location of such abscesses in the facial and cervical areas, classical surgical management and debridement is, in some instances, unacceptable by the patient, and classical extensive drainage is not easy to achieve.

**P70**

**The influence of hepatitis C virus infection on H1 antihistamine treatment in urticaria patients**

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**BMC Infectious Diseases 2014, 14(Supp 7):**P70

**Background:** Considerable evidence indicates that, in addition to anti-allergic effect, several H1-antihistamines also possess anti-inflammatory properties. The anti-inflammatory activity of H1 antihistamine treatment in urticaria patients is based on the capacity of H1-antihistamines to inhibit the release of chemical mediators from mast cells and basophils, to regulate the chemotaxis of neutrophils and eosinophils, to increase eosinophils apoptosis and to reduce the expression of the adhesion molecules. Viral hepatic infections may affect the efficacy of H1 antihistamines probably interfering with their hepatic metabolism through cytochrome P450 system. We proposed to analyze the effect of hepatitis C virus (HCV) infection on the therapeutic efficacy of H1 antihistamines in urticaria patients.

**Methods:** The study included 37 acute and chronic spontaneous urticaria patients divided into two groups (A,B) depending on the associated HCV infection. Group A consisted of 30 urticaria patients without HCV infection and group B included 7 urticaria patients associated HCV infection. The experimental analysis targeted the dynamic of urinary histamine level (spectrofluorimetric method) depending on the Urticaria Activity Score (UAS) and C-reactive protein (CRP) level in patients with urticaria, during the treatment with H1-antihistamines. The clinical and paraclinical analyses were evaluated at the study entry and at 2 weeks after initiating the H1-antihistamine treatment.

**Results:** We obtained much stronger correlations between urinary histamine level and UAS, respectively CRP, for patients in group A (r=0.924, p<0.05, respectively r=0.286, p<0.05 after two weeks of H1-anti histamine treatment) comparing to those in group B (r=0.836, p<0.05, respectively r=0.491, p<0.05 at study entry and r=0.484, p<0.05, respectively r=0.265, p<0.05 after two weeks of H1-anti histamine treatment) at both times of the assessment.

**Conclusion:** HCV infection reduces the anti-inflammatory effect of H1-antihistamines in urticaria patients.

**P71**

**The role of PCR in the diagnosis of tuberculous meningoencephalitis in children – Case report**

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**BMC Infectious Diseases 2014, 14(Supp 7):**P71
**Background:** Tuberculous (TB) meningoencephalitis is an extremely severe condition which requires a quick and correct diagnosis in order to institute a specific etiological treatment in a timely manner. The current “classical” diagnosis of TB meningitis is established through CSF cultures. The result is often inconclusive or is heavily delayed in the case of positive cultures (4-6 weeks). PLEX-ID is a new method which can establish an etiological diagnosis of bacterial infection in a matter of hours by detecting bacterial DNA in various pathological products (blood, CSF, synovial and pleural fluid).

**Case report:** We present two cases admitted in the Pediatric Intensive Care Unit of the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” with the suspicion of acute TB meningoencephalitis. The first case was a boy of 4 years old, and the second is represented by a little girl aged 4 years and 6 months. The positive diagnosis was established though classic clinical and laboratory criteria and confirmed by molecular methods of diagnosis (bacterial PCR). The treatment was given immediately after admission in the first case, but the second child was transferred to our clinic in severe condition, with external ventricular shunt for hydrocephalus and she started the treatment after 3 weeks from onset.

We have monitored the correlation of the data obtained through classical molecular methods as well as the clinical and biological evolution of the patients under anti-tuberculous treatment. Etiology was determined by bacterial PCR obtained from CSF which identified Mycobacterium tuberculosis as the causative agent responsible in both cases. Evolution was different in these cases. In the first case, because treatment was given in the first hours after admission, the evolution was favorable, but in the second one unfortunately it was fatal.

**Conclusion:** TB meningoencephalitis represents a severe condition with a high mortality rate and high frequency of neurological sequelae, which imposes urgent institution of adequate treatment. New molecular methods are very helpful both in establishing an early diagnosis and in determining antibiotic sensitivity to best choose a correct and efficient therapeutic regimen.

**Consent:** Written informed consent was obtained from the parents for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

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**P73**

**Therapeutic approach to patients with rheumatoid arthritis and chronic HBV/HCV infection**

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**Background:** Treating chronic HCV/HBV-infected patients with concomitant rheumatoid arthritis (RA) may be a challenge to the clinician. The liver disease limits to some degree the treatment for the rheumatic disease as the drugs used are hepatotoxic or at risk of infection reactivation. The aim of the study is to evaluate the particularities and the safety of RA treatment in patients with both conditions and to investigate the prevalence of HBV/HCV infections in RA patients.

**Methods:** We performed a cross-sectional analysis of all HCV/HBV co-infected patients with concomitant RA admitted between 2009-2014, assessing the clinical, laboratory, treatment data and verifying the statistic correlations.

**Results:** The study included 66 patients, with both chronic liver infection and RA, of which 35 (53%) patients had HCV, 24 (36.3%) had HBV and 7 (10.6%) were co-infected. The median age was 61±11 years, sex ratio male/female 13/53. The HCV-infected patients had a very active rheumatoid disease activity score (DAS28) (5.03±1.43) while the HBV and co-infected patients had a moderate DAS (DAS28=4.06±1.68), respectively DAS28 (3.05±1.74) (p=0.015). Therapeutic options include disease-modifying anti-rheumatic drugs (DMARDs), classic or biologic as well as corticosteroids (CS). In our study, most patients, 25 (37.8%) received hydroxychloroquine, 9 (13.6%) patients received methotrexate and 7 (10.6%) patients sulfasalazine alone. Combinations included hydroxychloroquine + sulfasalazine in 5 (7.57%) patients and methotrexate + hydroxychloroquine in 4 (6%) patients.

In 1 (14.2%) patient out of 7 receiving biologic treatment 6 (85%) infliximab, 1 (14.2%) etanercept, 5 (71, 42%) rituximab – current or prior treatment, reactivation of the HBV infection occurred, during the 6th cycle of therapy. The rise in the liver enzymes, leading to discontinuation were seen in 14 (56%) patients receiving methotrexate, followed by 7 (10.6%) patients receiving sulfasalazine, and 1 (4.3%) in the hydroxychloroquine group. Significantly more patients in the HCV group 27 (80%), compared with the HBV group 24 (45.8%), had an active disease and were given low dose corticosteroids (p=0.028).

**Conclusion:** The presence of the liver infection limits to some degree the therapy for RA. Classic DMARDs such as methotrexate should be closely monitored as they proved most hepatotoxic and led to frequent discontinuation. Hydroxychloroquine was best tolerated. HCV-patients with RA often require more aggressive therapy, including biologics, which also have to be used with caution. The prevalence of HCV infection was higher than HBV infection in the study RA group. Also HCV-infected patients had a more active rheumatic disease and used corticosteroids more frequently.

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**P74**

**Transethmoidal nasal meningocele and CSF fistula in a child with recurrent bacterial meningoencephalitis**

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**Background:** Tuberculous (TB) meningoencephalitis is an extremely severe condition which requires a quick and correct diagnosis in order to institute a specific etiological treatment in a timely manner. The current “classical” diagnosis of TB meningitis is established through CSF cultures. The result is often inconclusive or is heavily delayed in the case of positive cultures (4-6 weeks). PLEX-ID is a new method which can establish an etiological diagnosis of bacterial infection in a matter of hours by detecting bacterial DNA in various pathological products (blood, CSF, synovial and pleural fluid).

**Case report:** We present two cases admitted in the Pediatric Intensive Care Unit of the National Institute for Infectious Diseases “Prof. Dr. Matei Balș” with the suspicion of acute TB meningoencephalitis. The first case was a boy of 4 years old, and the second is represented by a little girl aged 4 years and 6 months. The positive diagnosis was established though classic clinical and laboratory criteria and confirmed by molecular methods of diagnosis (bacterial PCR). The treatment was given immediately after admission in the first case, but the second child was transferred to our clinic in severe condition, with external ventricular shunt for hydrocephalus and she started the treatment after 3 weeks from onset.

We have monitored the correlation of the data obtained through classical molecular methods as well as the clinical and biological evolution of the patients under anti-tuberculous treatment. Etiology was determined by bacterial PCR obtained from CSF which identified Mycobacterium tuberculosis as the causative agent responsible in both cases. Evolution was different in these cases. In the first case, because treatment was given in the first hours after admission, the evolution was favorable, but in the second one unfortunately it was fatal.

**Conclusion:** TB meningoencephalitis represents a severe condition with a high mortality rate and high frequency of neurological sequelae, which imposes urgent institution of adequate treatment. New molecular methods are very helpful both in establishing an early diagnosis and in determining antibiotic sensitivity to best choose a correct and efficient therapeutic regimen.

**Consent:** Written informed consent was obtained from the parents for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

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**P72**

**The seroprevalence of several infections in urticaria**

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**Background:** Over the time, many infections were attributed to be the cause of urticaria. We proposed to assess the seroprevalence of hepatitis B virus (HBV), hepatitis C virus (HCV) and Helicobacter pylori infection in acute and chronic spontaneous urticaria patients.

**Methods:** We conducted a prospective study which included 236 acute spontaneous urticaria patients, 25 (37.8%) received methotrexate should be closely monitored as they proved most hepatotoxic and led to frequent discontinuation. Hydroxychloroquine was best tolerated. HCV-patients with RA often require more aggressive therapy, including biologics, which also have to be used with caution. The prevalence of HCV infection was higher than HBV infection in the study RA group. Also HCV-infected patients had a more active rheumatic disease and used corticosteroids more frequently.

**Conclusion:** Based on these results, we can conclude that the incidence of urticaria is higher in patients suffering from infections, but the analyzed pathogens in this study cannot be considered risk factors for the occurrence of urticaria, although their presence may exacerbate the symptomatology and the evolution of this disease. The therapy of these infections may ameliorate urticaria and the efficiency of the H1 antihistamine treatment.

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**Consent:** Written informed consent was obtained from the parents for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.
Background: Recurrent bacterial meningitis in children poses a considerable diagnostic challenge due to its multiple etiologies. Making an early diagnosis is crucial in preventing further episodes that could lead to a potentially life threatening condition, neurologic sequelae and psychological trauma due to multiple invasive investigations. Recurrent bacterial meningitis has multiple underlying conditions, but it is most frequently caused by anatomic intracranial or lumbosacral defects (encephaloceles, meningocele, temporal bone malformations, skull fracture, dermoid cyst of the lumbosacral spine). Other predisposing conditions are different types of immunodeficiency (immunoglobulin deficiency, complement deficiency, HIV, asplenia) and chronic infections of the middle ear and parasanal sinuses.

Case report: We report the case of a 6 year-old child with recurrent meningocoeephalocele with a transethmoidal meningocele with corticospinal fluid fistula. The child was admitted to our intensive care unit for Streptococcus pneumoniae meningitis. She suffered from 4 episodes of bacterial meningitis in the previous year. The last brain computed tomography and MRI showed no signs of ear or parasanal sinus infection, but the MRI identified a slight asymmetry of the cribiform plates. The patient was vaccinated against pneumococcus and further multiple otolaryngology investigations with nasal endoscopy made a clear diagnosis of transethmoidal nasal meningocele of 2 mm diameter. An intranasal endoscopic surgical procedure was performed.

Conclusion: Making an accurate diagnosis of a base skull malformation makes it possible to perform necessary surgical intervention and thereby to prevent further episodes of bacterial meningitis. Initial imaging investigation of recurrent bacterial meningitis should include a contrast enhanced thin section CT scan of the temporal bone and anterior skull base, including the parasanal sinuses and an MRI imaging to detect CSF leakage. In our case only repeated otorlaryngology endoscopic examination could identify the meningocele, underlying the need for multiple specialty interaction in the management of recurrent meningitis.

P75
Vaccination of health care workers in Romania
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BMC Infectious Diseases 2014, 14(Suppl 7):P75

Background: We aimed to review existing regulations about HCWs vaccination in Romania and to identify the attitude and barriers to immunizations of HCWs through qualitative research.

Methods: We collected information about HCWs vaccination policies and regulation implemented through laws and data also about specific vaccination (seasonal influenza, hepatitis B, measles, mumps, rubella and varicella). We conducted 5 focus groups with 39 participants (nurses, physicians, infection control personnel, public health and policy makers), as part of the HPromune (Promotion of Immunizations for Health professionals in Europe) project activities, in order to understand the risk perception behaviors towards vaccination and barriers stopping HCWs from immunization. We followed for each focus group a specific discussion guide elaborated by the HPromune project.

Results: Each health facilities organize yearly influenza vaccination campaigns and HCWs received influenza vaccine at their work place, being covered from the Ministry of Health budget. No specific national recommendation regarding HCWs vaccination against varicella, pertussis, tetanus, diphtheria, poliomyelitis, meningococcus exist in Romania. The main barriers included: insufficient information on benefits of vaccines, insufficient information on diseases and the risk of diseases, concerns about vaccine effectiveness and adverse events, lack of support from a national guideline concerning the HCW immunization. Dominant immunization enablers included: influence of educational programs (in school and at the workplace) and communication campaigns, importance of hospital epidemiologist, infection control personnel and occupational physicians. The majority of HCWs highlighted that the immunizations should be mandatory in health care facilities.

Conclusion: Clear immunization policy and guidelines regarding occupational vaccination of HCWs in Romania, communication strategy and training programs are needed in order to increase confidence in vaccine and the vaccination coverage among HCWs.

P76
Therapeutic strategy regarding suppuration as a complication of abdominal wall defect repair with prosthetic material
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BMC Infectious Diseases 2014, 14(Suppl 7):P76

Background: Abdominal wall defects repair using prosthetic material is currently considered as the best available solution for most incisional hernias. Postoperative suppuration remains the most frequent and feared complication after this kind of intervention therefore imposing prevention methods. The aim of our study was to evaluate this serious yet controllable complication in the situation of a known pathogenic agent.

Case series: This retrospective case series was carried on in the Surgery and Emergency Clinic III of the University Emergency Hospital Bucharest.

It included an accurate disparation after abdominal wall reconstruction using prosthetic material during the last 15 years.

Conclusion: In the situation of specific pathogenic agent, the use of specific antibiotic therapy and certain rather simple surgical techniques could guarantee therapeutic success for the doctor as well as the patient. A very good collaboration between the surgeon and the infectious disease physician was the key to therapeutic success.

P77
Varicella – trend and challenge for surveillance and for introduction of routine immunization in Romania
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BMC Infectious Diseases 2014, 14(Suppl 7):P77

Background: Varicella is a viral disease which can be easily prevented through vaccination. In European Union the surveillance systems for varicella and herpes zoster are highly heterogeneous or absent and seventeen countries have recommendations on varicella vaccination. In Romania varicella vaccination is not included in the National Immunization Program (NIP), although a major number of cases are reported annually. Our aim is to provide an overview of surveillance system and epidemiological issues of varicella in Romania in the last 10 years (2004-2013).

Methods: In Romania there is no specific surveillance system for varicella, but there is a quarterly mandatory notification system of clinical confirmed cases and deaths, by age groups and place of residence. The system covers the total country population. We conducted a retrospective study using information reported by general practitioners and hospitals to the National Statistics Centre and National Centre for Surveillance and Control of Communicable Diseases.

Results: A total of 504,844 varicella cases were reported in Romania from 2004 to 2013 and 2 deaths (young adults with severe pneumonia related to varicella). The mean annual incidence 2004-2013 was 238.2 cases per 100,000 inhabitants, with the highest value from European Union in 2007 (326.9 cases per 100,000 inhabitants). Most of the cases (73.6%) live in urban areas. The most affected age-group were children 5-9 years (mean annual incidence 2004-2013: 1362.7 cases per 100,000 inhabitants), followed by 1-4 years (1297.2 cases per 100,000 inhabitants) and 10-14 years (947.2 cases per 100,000 inhabitants).

Conclusion: Varicella is a very common communicable disease in Romania. The current system of notification does not collect information regarding the clinical aspects, severity and real impact of the disease. For these reasons it is important to organize a case-based surveillance system.
When the skin speaks what HIV dictates: a series of particular cases of cutaneous manifestations in HIV
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Background: Recent data show that almost 75% of HIV patients have muco-cutaneous diseases, the proportion of patients with dermatoses being inversely proportional to the CD4+ and directly proportional to the stage of disease. Papulo-pustular eruption is the most common pruritic dermatosis in patients with HIV infection, followed by seborrhoeic dermatitis, psoriasis, molluscum contagiosum and drug reactions.

Case report: We report a series of cases of patients with skin diseases associated with HIV infection, which are distinguished by particular features and clinical course.


Conclusion: Most HIV patients can present with a variety of skin diseases throughout the evolution of HIV infection, as a result of achieved immunodeficiency or treatment. Patients undergoing HAART have a different clinical progress of HIV infections and therefore of dermatological manifestations, provided that the immune system’s functionality is restored.

Consent: Written informed consent was obtained from all patients for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

Zinc therapy for acute diarrhea in children under three years of age
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Background: Zinc therapy is recommended by WHO and UNICEF in acute diarrhea in children under 5 years old.

Methods: The study’s outcome was to investigate the efficacy of the zinc treatment in children aged 0-3 years, from the region of Bihor, Romania, with acute diarrhea. Zinc sulfate (10-20 mg daily, according to age) was given to the patients in the study group for 10 days. All children were followed up over a period of 3 months for new episodes of diarrhea.

Results: During 2009-2011, 116 children with acute diarrhea from Bihor county, Romania, were enrolled in the study. From initial group, 103 children were available for final analysis. The duration of diarrhea in the study group (n=53) as compared to control (n=50) was reduced by 24 hours (1.94±0.7 days versus 2.42±1.2 days, p<0.001, Student’s t test). Diarrheic episodes in the next three months occurred more frequently in the control group (3.8% versus 16%, p=0.036, Student’s t test).

Conclusion: Zinc supplementation has a significant effect on the duration of acute diarrhea. The mineral can reduce the frequency of acute diarrhea in the next 3 months.

Acknowledgement: Financing of this study was supported by own sources.

The role of the infectious disease physician in abdominal wall repair using prosthetic material after clean-contaminated surgery
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Background: Use of antibiotic prophylaxis when prosthetic implants are present at the abdominal wall was a controversial decision. It is a delicate matter since parietal prosthetics frequently associate surgical visceral interventions (cholecystectomy, appendectomy, enterectomy/enterorrhaphy, and colectomy).

Page 39 of 45
Methods: This study was carried out in the Surgery and Emergency Clinic of the University Emergency Hospital Bucharest. It is based on a 5-year experience (2010-2014), retrospective evaluation on 224 incision hernias with prosthetic material, of which 216 in a clean environment and 28 in a clean-contaminated environment. For all the cases of intestinal perforation, the antibiogram was provided by the antibiotics, recent approaches tend to choose the antibiotics that cover the most pathogens. We analyzed the monthly distribution of admissions in the Infectious Diseases Department and to evaluate if the seasonality still exists.

Methods: We analyzed the monthly distribution of admissions in the Infectious Diseases Department (ID) during 2011 with the aim to investigate the burden of diarrheal diseases, an acute condition that can be either infectious or post-drug side effects. We aimed to investigate the seasonal trends of diarrheal diseases and the impact of antibiotic prophylaxis. We aimed to investigate the seasonal trends of diarrheal diseases and the impact of antibiotic prophylaxis. To reach these aims, we retrospectively evaluated the number of admissions in the ID during the period from January 2011 to December 2011. We excluded from the analysis the patients that require prosthetic material and draw attention to the importance of prevention methods. In diarrheal diseases with prolonged hospitalization days (≥5 days), diarrhea was an indicative symptom for infectious diarrhea with identified etiology, lasting 4.4% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.8% of hospitalization days; other infectious diarrhea (rotavirus, norovirus, adenovirus, and others), 45 patients and 2.9% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.2% of hospitalization days. For 10 patients summing 52 hospitalization days, diarrhea was an indicative symptom for infectious diarrhea with identified etiology, lasting 2.5% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.2% of hospitalization days. For 10 patients summing 52 hospitalization days. In diarrheal diseases with prolonged hospitalization days (≥5 days), diarrhea was an indicative symptom for infectious diarrhea with identified etiology, lasting 4.4% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.8% of hospitalization days; other infectious diarrhea (rotavirus, norovirus, adenovirus, and others), 45 patients and 2.9% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.2% of hospitalization days. For 10 patients summing 52 hospitalization days, diarrhea was an indicative symptom for infectious diarrhea with identified etiology, lasting 2.5% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.2% of hospitalization days. For 10 patients summing 52 hospitalization days.

Results: The most frequent CVRF were: hypertriglyceridemia (58%), decreased HDL levels (14%), smoking (14%), and obesity (14%). The patients from the five subgroups represented: CDI, 52 of patients (47.3%) and 66% of patients x hospitalization days; food poisoning, 13 patients and 2.9% of hospitalization days; other infectious diarrhea (Salmonella, rotavirus), 4 patients and 2.8% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.2% of hospitalization days. For 10 patients summing 52 hospitalization days (6.1%), diarrhea was an indicative symptom for infectious diarrhea with identified etiology, lasting 4.4% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.2% of hospitalization days. For 10 patients summing 52 hospitalization days. In diarrheal diseases with prolonged hospitalization days (≥5 days), diarrhea was an indicative symptom for infectious diarrhea with identified etiology, lasting 4.4% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.8% of hospitalization days; other infectious diarrhea (rotavirus, norovirus, adenovirus, and others), 45 patients and 2.9% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.2% of hospitalization days. For 10 patients summing 52 hospitalization days, diarrhea was an indicative symptom for infectious diarrhea with identified etiology, lasting 2.5% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.2% of hospitalization days. For 10 patients summing 52 hospitalization days.

Conclusion: CDI has the highest burden among diarrheal diseases in the Infectious Diseases Department; the CDI emergence seems to eliminate the seasonality of diarrheal diseases. A small number of admissions are still present: 4.4% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.8% of hospitalization days; other infectious diarrhea (rotavirus, norovirus, adenovirus, and others), 45 patients and 2.9% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.2% of hospitalization days. For 10 patients summing 52 hospitalization days, diarrhea was an indicative symptom for infectious diarrhea with identified etiology, lasting 4.4% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.8% of hospitalization days; other infectious diarrhea (rotavirus, norovirus, adenovirus, and others), 45 patients and 2.9% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.2% of hospitalization days. For 10 patients summing 52 hospitalization days, diarrhea was an indicative symptom for infectious diarrhea with identified etiology, lasting 2.5% of hospitalization days; unknown etiology diarrhea, 31 patients and 2.2% of hospitalization days. For 10 patients summing 52 hospitalization days.

P84
Influenza viruses circulation and the effectiveness of seasonal influenza vaccine in Romania during the season 2013-2014
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BMC Infectious Diseases 2014, 14(Suppl 7):P84

Background: Influenza is a serious disease, causing sickness in about 5-15% of the population every season, of which about up to 1-3% die every year in Europe. The epidemiological and virological surveillance of influenza provide information necessary to detect novel viruses with pandemic potential, to guide designing appropriate vaccines and prophylaxis. We aimed to investigate the profile of influenza viruses circulating in Romania during the season 2013-2014 and to estimate the effectiveness of the seasonal influenza vaccine.

Methods: We tested all specimens collected from patients with influenza like illness (ILI) in the national surveillance system from week 40/2013 to week 20/2014. Influenza A/B positive specimens identified by molecular detection (RT-PCR) were further characterized. We used hemagglutination inhibition assay for antigenic characterization and chemiluminescence assay for the antiviral susceptibility testing. Subsequently we conducted
The influenza activity started in Romania in the first week of 2014, when more than 10% of samples tested were positive, reaching the peak in week 10 and lasted until week 18/2014. We tested 709 specimens, and 291 cases were positive (60.8% influenza A/H3N2), 35.4% A(H1N1)pdm09, 3.8% influenza B. Fifty-seven influenza viruses were antigenically and/or genetically characterized. The isolates A(H1N1)pdm09 and H3N2 corresponded with the viruses recommended by WHO for inclusion in the 2013/14 northern hemisphere seasonal influenza vaccine. Influenza B viruses belonged to B/Yamagata/16/88 lineage clade 3 represented by B/Stockholm/12/2011. All tested strains (46) demonstrated susceptibility to oseltamivir and zanamivir, except influenza for subtype B strain, whose IC50 value was at the upper limit of the baseline previous season. The crude IVE against any influenza (N=147) was 66% (95%CI: -47; 94) and the adjusted IVE for age group and week of swabbing was 68% (-95; 95).

Conclusion: Influenza activity was lower compared to the last three seasons and the season 2013-2014 was characterized by a mixed virological picture, with domination of influenza A(H3N2). The vaccine effectiveness suggests a moderate protection, taking into account the small sample size and the low vaccination coverage (2.7%).

Background: The national guideline extends the recommendation for initiating antiretroviral therapy in HIV infected persons, regardless of baseline CD4 since 2013 but the choice of treatment regimens in our guide is determined by the CD4 levels. Objectives: analyzing ART regimens prescribed in newly HIV-infected patients, identifying the factors that influenced regimens choice and analyzing viro-immunological evolution under therapy.

Methods: Retrospective study of adult patients with confirmed HIV infection who initiated antiretroviral treatment in a hospital for infectious diseases in Bucharest, between January 2012 and December 2013. The association between ART regimen choice and several variables was analyzed using cross-tabulation and logistic regression. The outcome variable was the viro-immunological evolution under therapy.

Results: Of the 499 patients confirmed with HIV infection, 243 (48.70%) have initiated antiretroviral therapy. Comparative analysis shows that treated patients have a higher median age (33.39 vs. 30.89 years; p=0.002), with a significantly higher proportion of women (82/243 vs. 55/256; p=0.002) and a percentage of IV drug users significantly lower (45/243 vs. 190/256; p=0.00001).

Conclusion: The percentage of patients with VL undetectable at 6 months was 51.06% for those treated with NNRTIs 34.29% for those treated with PIs, 30.7% for those treated with 3Ls and 20% for those treated with other regimens. These values reflect the important issues of adherence to ARV therapy seen in our patients.

Conclusion: In our patients a CD4 cell count below 350 cells/mm2 and co-infections influence the choice of the ARV regimen. Inadequate adherence is responsible for the small percentage of patients with VL undetectable after 6 months of treatment.

Background: Q fever is a zoonosis with reported outbreaks in rural areas. The transmission and RNA-HIV1 at baseline. The crude IVE against any influenza (N=147) was 66% (95%CI: -47; 94) and the adjusted IVE for age group and week of swabbing was 68% (-95; 95).

Conclusion: Influenza activity was lower compared to the last three seasons and the season 2013-2014 was characterized by a mixed virological picture, with domination of influenza A(H3N2). The vaccine effectiveness suggests a moderate protection, taking into account the small sample size and the low vaccination coverage (2.7%).

P85

Initiating the antiretroviral therapy in treatment-naïve patients

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BMC Infectious Diseases 2014, 14(Suppl 7):P85

Background: The national guideline extends the recommendation for initiating antiretroviral therapy in HIV infected persons, regardless of baseline CD4 since 2013 but the choice of treatment regimens in our guide is determined by the CD4 levels. Objectives: analyzing ART regimens prescribed in newly HIV-infected patients, identifying the factors that influenced regimens choice and analyzing viro-immunological evolution under therapy.

Methods: Retrospective study of adult patients with confirmed HIV infection who initiated antiretroviral treatment in a hospital for infectious diseases in Bucharest, between January 2012 and December 2013. The association between ART regimen choice and several variables was analyzed using cross-tabulation and logistic regression. The outcome variable was the viro-immunological evolution under therapy.

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Conclusion: The proportion of patients with CD4<350 cells/mm at baseline was significantly higher in those treated with 2NRTIs+Pis compared to those treated with 2NRTIs+NNRTIs (106/137 vs. 51/80; p=0.004). Patients co-infected with HIV/HCV and HIV/HBV were most commonly treated with IIs and 20% for those treated with other regimens. These values reflect the important issues of adherence to ARV therapy seen in our patients.

Conclusion: In our patients a CD4 cell count below 350 cells/mm2 and co-infections influence the choice of the ARV regimen. Inadequate adherence is responsible for the small percentage of patients with VL undetectable after 6 months of treatment.

P86

Q fever in urban area – an emerging zoonosis

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Background: Q fever is a zoonosis with reported outbreaks in rural areas, related to farms and farm animals. In the urban area, the source of infection is almost always unknown and can be related to windborne spread of Coxiella burnetii. Objective: To emphasize the importance of Coxiella burnetii etiology in prolonged febrile syndrome. We want to point out that Q Fever can become a real threat even in the urban area.

Methods: We made a retrospective analysis of Q fever cases treated in Matei Balș Institute between August 2011 and July 2014, insisting on the delay of diagnosis and treatment in these cases. The diagnosis was made using ELISA for IgM antibodies against Coxiella and the confirmation was made by immunofluorescence assay (phase I and phase II antibodies).

Results: Eighty-nine patients with a mean age of 49.7 year-old and a sex ratio M:F = 1.61 were included: 9 patients in 2011 (10.11%), 21 in 2012 (23.59%), 33 in 2013 (37.07%) and 26 in the first semester of 2014 (29.21%). An ascendant trend was observed. Almost all cases were registered in the warm season (from May to September) - 83.14%. In the urban area were recorded 84.26% cases. In only 5 cases, the patients were at risk of contamination. The organs affected during Coxiella infection were: lungs (82.02%), liver (76.04%) and heart (6.74% - 2 cases of myocarditis and 4 cases of endocarditis). The most common clinical presentation was for acute febrile disease associated with: pneumonia and hepatitis – 55.05%, pneumonia only – 23.59%, hepatitis only – 14.06%, endocarditis plus pneumonia and hepatitis – 4.49%, myocarditis plus hepatitis – 2.24%. More than two SIRS criteria were found in 70.7%; a procalcitonin level >2 ng/mL was found in 18.66% of cases. The delay between the first sign of disease and the diagnosis varied between 2 and 60 days with a mean duration of 15.21 days. The mean delay until an active antimicrobial was administered was 8.03 days. Doxycycline was the most used antimicrobial – 84.26%. In 15.74% of cases, fluoroquinolones were administered. The mean duration of therapy in non-endocarditis patients was 15.5 days.

Conclusion: Coxiella burnetii infection should be considered in patients with prolonged fever of unknown etiology. The association between pneumonia and hepatitis in a case of prolonged febrile syndrome is highly suggestive for Q fever even though the patient lives in urban areas.
Background: Several authors have recently reported that resistin, a novel adipokine, may be associated with insulin resistance in HIV patients. Our objective was to evaluate resistin dysfunction in correlation with insulin sensitivity, lipid abnormalities and markers of inflammation in a cohort of adult HIV infected patients who were under complex combined therapy (cART).

Methods: We performed a transversal study that used the following inclusion criteria: non-diabetic patients with documented HIV infection, undergoing stable cART for at least 6 months. Clinical, metabolic, inflammatory and immuno-virological patterns were assessed (age, sex, body mass index, HIV load, actual and nadir CD4, duration of HIV infection and antiretroviral therapy, lipid panel, C-reactive protein - CRP). Resistin levels were evaluated using KAPME Biosource EASIA. In order to test the sensitivity to insulin we used the QUICKI index, the best surrogate marker after glucose clamp index. Parametric and non-parametric variables were described using means (±Standard Deviation - SD) and medians (Interquartile Ratio - IQR), respectively.

Results: We enrolled 94 patients (56.4% males, 43.6% females), with a mean age of 31.9 (±13.5) years. The median time from HIV diagnosis was 63 (74) months; the median time of treatment was 60 (50) months. More than half of patients (72.3%) had undetectable HIV load and the median CD4 count was 492 (419)/μm. The mean level of resistin was 6 (±2.6) ng/mL. The most frequent resistin dysfunction, after adjusting the results by sex and age, was hyporesistinemia (40.2%); hyperresistinemia was less frequent (17.4%). Most patients had insulin resistance (66.3%), based on QUICKI levels below the cut-off point of 0.33. We found no relation between QUICKI values and resistin, in a linear regression model (R=0.034, p=0.614) or correlation between the presence of insulin resistance and resistin dysfunction (p=0.320). Lipid metabolism abnormalities were not influenced by resistin dysfunction. Resistin serum values were positively correlated with the levels of CRP (R=0.21, p=0.05).

Conclusion: In our cohort of young HIV infected patients, insulin resistance was not mediated by resistin dysfunction, contrary to recent reports, but may contribute to an increased inflammatory profile.

Acknowledgement: This paper is supported by the Sectoral Operational Programme Human Resources Development (SOP HRD), financed from the European Social Fund and by the Romanian Government under the contract numbers POSDRU/159/1.5/S/137390.

**P88**

**Acute unilateral vestibular loss as onset of zoster oticus infection**

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**Background:** Objectives: To emphasise the importance of possible aetiologies of unilateral vestibular loss for the long term improvement of quality of life in these patients.

**Case report:** A 53-year-old man presented at the emergency room with severe vertigo, vomiting and disequilibrium. Based on bed-side otoneurological evaluation and audiometry, we considered a case of vestibular neuritis (usually herpes simplex infection) and we immediately started intravenous treatment with cortisone, vestibular suppressants and betaistine. Unfortunately, after two days, patient developed ipsilateral peripheral facial palsy, ipsilateral sensorineural severe hearing loss and hyperglycaemia. Patient was included in an antidiabetes treatment protocol. We considered at that later moment the infection as a herpes zoster infection (herpes zoster oticus or auricular herpes zoster, Ramsay Hunt syndrome) and we continued intravenous administration of vasodilators and group B vitamins, but without cortisone due to hyperglycaemia.

Facial palsy appeared slowly but completely as well as dizziness (4 month), but this was not the case with the hearing loss.

**Conclusion:** Even though recommended treatment for vestibular neuritis is based on cortisone, we always have to keep in mind that the aetiology of the acute unilateral vestibular loss can make the difference in long term recovery of these patients, as well as possible risk of developing iatrogenic hyperglycaemia.

Consent: Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

**P89**

**Anti NMDA-receptor encephalitis: a severe case (34 year-old male) with psychotic disorders**

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**Background:** Acute encephalitis associated with antibodies to the N-methyl-D-aspartate subtype of glutamate receptor is a recently described condition, the majority of cases presenting as a paraneoplastic syndrome in young females.

**Case report:** We report the case of a 34 years-old male with anti-NMDA receptor encephalitis who exhibited the classical pattern. The patient described psychiatric symptoms, seizures, movement disorders, altered state of consciousness and autonomic dysfunction, over the course of 40-50 days. After a 20-day hospitalization in a psychiatric ward, the case was redirected to our infectious disease – intensive care facility, where he required advanced life support. The interdisciplinary team of infectious diseases, intensive care and neurology specialists raised the diagnosis suspicion of encephalitis. The patient received empirical corticotherapy and therapeutic plasma exchange, with significant clinical improvement in the second week of treatment, coinciding with the diagnostic confirmation by positive results for anti-NMDA receptor antibodies in both serum and cerebrospinal fluid.

The patient continued his recovery in a specialized neurology department. Infectious disease specialists are often confronted with encephalitis of unknown etiology.

**Conclusion:** Collaboration with neurologists and psychiatrists with knowledge of this disorder is very important for an early diagnosis and treatment, as full recovery is a possible outcome for these patients with the correct case management.

Consent: Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

**P90**

**Clostridium, a “difficultie” infection that can cause a reactive arthritis**

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**Background:** Clostridium difficile infection (CDI) is a common cause of antibiotic-associated diarrhoea and can be difficult to cure. Most patients with CDI present only colonicopathy and in fewer cases extra intestinal features were described such reactive arthritis (ReA). We present a series of cases with CDI-associated reactive arthritis (CDI-AREA), admitted between 2011-2014 in the National Institute for Infectious Diseases “Prof. Dr. Matei Balș”.

**Case report:** Four patients, one male (22 years) and 3 female (median age 63 years) were diagnosed with CDI-AREA. They had monoarthritis, mild leukocytosis, elevated CRP and were treated with anti clostridial antibiotics and anti-inflammatory drugs with favorable outcome.

We include the case of a 63-year-old female admitted in May 2014 to the Adults 3 Department of INBI for watery diarrhea. One week previous to her admission, she underwent cholecystectomy and had received ceftriaxone for five days. Two days after discharge she developed 6-7 watery stools, without fever and any other symptoms. Because Clostridium difficile toxin EIA was positive she was admitted in our
Institute with CDI and ATLAS score 2. She received vancomycin p.o.250 mg QID for 14 days. After six days she developed left knee pain and swelling. She denied any local trauma, conjunctivitis, rash, mucous membrane lesions or dysuria. The lung, cardiovascular and genito-urinary exams were normal. Musculoskeletal exam revealed left knee swelling, tenderness and painful with movement. Laboratory studies showed CRP 18.6 mg/l, but normal WBC, ESR, acid uric, CPK and rheumatoid factor. Blood culture, urine culture and serology for *Chlamydia trachomatis* and *Borreliia* were negative. Stool culture was negative for *Salmonella*, *Shigella*, *Yersinia*, and *Campylobacter*. Arthrocentesis of the left knee revealed a cloudy synovial fluid with Rivalta 3+, WBC count over 50,000/mm3 with 85% neutrophil, 15% mononuclear cells, fibrin 3+, high protein level, LDH 2212 IU/L and glucose 107 mg/dL. Cristal exam, gram stain and culture were negative. X-rays of the knee was negative for abnormalities and ultrasound show important joint effusion. Diagnosis of CDI-AReA was made. The patient received nonsteroidal anti-inflammatory meloxicam 15 mg/day. The diarreha resolved quickly and no recurrent CDI occurs but the effusion persisted and slowly resolved several weeks after discharge. 

**Conclusion:** *Clostridium difficile* should be recognized as a rare cause of reactive arthritis. We emphasize the importance of a proper diagnosis and treatment of arthritis. It is important that clinicians avoid unnecessary antibiotic therapy for CDI-AReA.

**Consent:** Written informed consent was obtained from the patients for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

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**P91**

**Critically ill patient – a permanent challenge**

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**Background:** We present the winding, progressively aggravating evolution of a 70-year-old patient, with multiple risk factors (arterial hypertension, NYHA class II/III heart failure, atrial fibrillation, sequele stroke, bladder AK, treated with chemotherapy, urinary catheter carrier) who developed sepsis of multiple bacterial etiology – MDR „hospital” Gram-negative bacilli (GNB) and fungi.

**Case report:** We present the patient evolution, who in February 2014, following emergency surgery for occlusive syndrome presented severe cardiac decompensation and MDR GNB bronchopneumonia requiring advanced support of vital functions (neurological, respiratory, heart, kidney and liver), the patient was extubated but the febrile syndrome recurred, and the biological and imaging data demonstrated a septic evolutionary process. The positive cultures for *P. aeruginosa*, *A. baumannii*, *K. pneumoniae*, all MDR and *Candida* spp., in conjunction with biological and PCQT changes required infectious diseases consultation. The recommend therapy: meropenem + colimycin + linezolid + fluconazole in adequate dose.

The evolution of the infectious process appeared to be controlled without fever after 24h of treatment and the procalcitonin level decreased. Our patient was transferred for further ABT + AFT (antifungal therapy). During hospitalization in the ICU of INBI the patient continued ABT + AFT, slowly evolving favorably and we obtained: evidence of negative microbial cultures, without fever, in the absence of ABT and AFT (for a period of 12 days).

The patient presented a new episode of sepsis caused by *K. pneumoniae* – PDR (carabapenemase positive) with positive urine and blood cultures. Reintroduction of a new „rescue” ABT scheme – meropenem + tigecycline + colimycin, with microbiologic control proving the off-label dosing.

**Conclusion:** In the era of microbial resistance we believe that interdisciplinary team decisions are absolutely mandatory from the start, especially in the critically ill patient, requiring associations ABT ± AFT, strictly individualized, often including off-label doses that require specialized expertise. Despite the efforts made and the evidence of microbiological control, as it was likely to happen due to comorbidities and severity of vital organ dysfunction, the patient developed severe heart rhythm disorder followed by exitus. So, in patients with severe immunosuppression, we are continuously forced to maximize therapy regardless of pan-resistance in vitro and trying, at the least, to demonstrate control of the septic process.

**Consent:** Written informed consent was obtained from the next of kin for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

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**P92**

**Mitrval endocarditis in an IV ethnobotanical drug user confected with HIV-HCV**

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**Background:** Intravenous ethnobotanical drug usage (”legal drugs”) has increased dramatically in the past few years in our country, developing specific pathology characterized by HIV and HCV infections, staphylococcal sepsis, pulmonary or disseminated tuberculosis and neuropsychiatric issues related to the addiction syndrome.

**Case report:** We present the case of a young male, MMA, 30 years of age, iv ethnobotanical drug user since 2010 (ex-heroine user since 1994), who was admitted in our intensive care unit for stage III coma, recently installed after prolonged febrile syndrome at home (previously has refused hospitalization). His HIV and HCV tests were positive, chest x-ray was conclusive with staphylococcal bronchopneumonia, cardiac echography showed gigantic mitral valve vegetation and brain MRI showed multiple cerebral abscesses. Blood culture was positive for methicillin resistant *Staphylococcus aureus*, establishing diagnosis of sepsis with multiple system organ failure. He was intubated and received broad spectrum antibiotics for more than 3 months, as well as supportive therapy. He also receives tuberculostatic regimen (because of persistent fever and epidemiological risks) which was stopped when no bacteriological evidences for tuberculosis were obtained. Because immunological suppression was severe (initial CD4 count of 131 cells/mL), antiretroviral treatment with raltegravir and abacavir/lamivudine was given with appropriate psychological counseling. After slightly improvement patient presented sudden chest pain, aphasia and right hemiparesis due to septic emboli from the mitral vegetation. After recovered once again, nine months from the initial admission, having no evidences of active infection, patient underwent mitral valve replacement with good post operator recovery.

**Conclusion:** 1. Even if less frequently found in drug users, left heart endocarditis is more life threatening, requestung prolonged therapy and high costs. 2. We expected that in the near future this cases to be more and more frequent, because the usage of intravenous drug is not properly controlled, with high risk for spreading HIV, HCV and TB infections in the young generation.

**Consent:** Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

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**P93**

**Neurological complications in HIV patients – a case of PML-IRIS**

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BMC Infectious Diseases 2014, 14(Suppl 7):P93

**Background:** Progressive multifocal leukoencephalopathy (PML) is a rare but frequently fatal demyelinating disease caused by the JC polyomavirus
Written informed consent was obtained from the patient for the publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

**P94**

**Pneumococcal meningocoecephalitis: evolutive particularities in a case with leukemia. Case report**

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**BMC Infectious Diseases 2014, 14(Suppl 7):P94**

**Background:** Streptococcus pneumoniae represents the main cause of meningocoecephalitis in adults. Penicillin-resistant *Streptococcus pneumoniae* has a high prevalence, representing an important cause of mortality and morbidity.

**Case report:** We present the case of a female patient, aged 62 years, diagnosed with chronic lymphatic leukemia and Listeria monocytogenes meningitis in the past two years, who was hospitalized in the Clinic of Infectious Diseases I with symptoms of high grade fever, altered state of consciousness, generalized tonic-clonic seizures, right oculocephalopathic deviation and coma, Glasgow Coma Scale 3 when admitted, following intense care unit and ventilatory support for ten days.

After two days of hospitalization the patient developed a labial hemorrhagic necrotic herpetic lesion. Lumbar puncture with cerebrospinal fluid assessment revealed a turbid fluid with leukocyte count 620/3 cells/μL, glucose 19 mg/dL, Pandy reaction was positive. Blood count interpretation indicated leukocytosis 14,000 cells/cm³, lymphocytosis 70% and neutropenia 23%. Cerebrospinal fluid Gram stains reveals Gram-positive diplococci and CSF culture grew penicillin-resistant *Streptococcus pneumoniae*. Computer tomography of the brain was negative for an acute intracranial pathology, and showed fluid collections and mucosa thickening of maxillary sinus.

Treatment was promptly administered with meropenem, vancomycin, corticosteroids, acyclovir and intensive care support led to patient survival, with a long, but favorable evolution of three weeks.

**Conclusion:** Pneumococcal meningocoecephalitis is a severe disease with high incidence in immunocompromised patients, which can lead to systemic complications in patients aged 60 years and older. A promptly administered treatment with broad-spectrum antibiotics is necessary, since resistance to penicillin of *Streptococcus pneumoniae* is common. The clinical evolution of patient was favorable, despite the multiple comorbidities and the profound altered general condition on admission and a low score on the Glasgow coma scale.

Consent: Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

**P95**

**Pulmonary, ocular and cutaneous Kaposi sarcoma in a HIV-infected patient**

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**BMC Infectious Diseases 2014, 14(Suppl 7):P95**

**Background:** Pulmonary Kaposi sarcoma involvement is frequent in HIV-infected patients, and the diagnosis is more difficult in severe immunosuppression. On the other hand, HIV-infected patients tend to develop malignant tumors, such as Kaposi sarcoma. Although cutaneous involvement is the most common manifestation, extracutaneous involvement is also possible.

**Case report:** We present the case of a 33-year-old male patient, HIV infected, with virological failure, who also had cutaneous (proven by histopathological exam of a cutaneous specimen) and ocular Kaposi sarcoma, prolonged fever and some pulmonary symptoms: cough, dyspnea, hypoxemia. Using bronchoscopy and pulmonary CT scan, we were able to diagnose the pulmonary involvement of Kaposi sarcoma.

**Conclusion:** Initial antibiotic and later antifungal therapy did not improve the pulmonary symptomatology (chest X-ray revealed bilateral bronchopneumonia); the evolution was slowly favorable only after the optimal control of HIV infection by antiretroviral therapy.

Consent: Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

**P96**

**Severe and prolonged febrile agranulocytosis under thyrosol**

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**BMC Infectious Diseases 2014, 14(Suppl 7):P96**

**Background:** It is well known that patients with severe neutropenia are susceptible to bacterial infections, which may become life-threatening. This hematologic disorder frequently occurs as an adverse effect of certain drug therapies. One of them, currently encountered in practice, is therapy with antithyroid drugs. An infective source is identified in 20-30% of febrile neutropenia episodes. Often the only infection proof is bacteremia, documented in 10-25% of patients.

**Case report:** We report the case of a patient known with Basedow-Graves disease, who developed a febrile agranulocytosis under thyrosol, and in which *Pseudomonas aeruginosa* was isolated from blood culture. Although the antibiotic treatment proved efficient and the patient recovered the neutropenia due to granulocyte colony-stimulating factor, the initial evolution was unfavorable, due to the impossibility of continuing antithyroid treatment and due to a heart rhythm disorder that...
appeared subsequently, on the patient’s background of mitral and aortic regurgitation. During hospitalization, a transfer to the intensive care department was necessary. After the remission of agranulocytosis, the patient underwent total thyroidectomy, because of an absolute contraindication of ever using thyrosol therapy. At 3 months of follow-up, the patient is on thyroid substitution, and is stable.

Conclusion: Despite an initially poor prognosis, the eventual evolution was favorable, through interdisciplinary cooperation between infectious diseases, endocrinology, hematology, cardiology, intensive care and surgery.

Consent: Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

**P98**

A case of hospital-acquired GNB infection - *P. aeruginosa* meningoencephalitis post laparoscopic cholecystectomy for biliary pancreatitis, complicated with portal vein branch thrombosis and intracerebral ischemic and hemorrhagic lesions

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**Background:** *Pseudomonas aeruginosa* infections involving the CNS usually present as meningitis or brain abscesses. The CNS invasion is the result of direct inoculation (head trauma, surgery), spread from a distant site (urinary, abdominal infections) or by direct invasion of a contiguous structure (inner ear, head sinus).

**Case report:** We present the case of a female patient admitted to our clinic with a suspicion of acute bacterial meningoencephalitis, one month after a laparoscopic cholecystectomy. During the first 48 hours she presented generalized seizures, 5-6 daily, with a duration that ranged from 30 to 60 seconds, that responded to medical therapy. The CSF cultures and the pulmonary tract secretions both tested positive for *P. aeruginosa*. The antibiotic regimen consisted of iv meropenem, colistin and ciprofloxacin for 7 days, then meropenem and ciprofloxacin for 21 days. The evolution and the treatment decisions were complicated by the discovery on the cerebral MRI of bilateral frontal ischemic and hemorrhagic lesions and a portal vein branch thrombosis. The patient registered almost complete cognitive and motor recovery, and is continuing the kinetotherapy.

**Conclusion:** This *P. aeruginosa* isolate had a resistance profile that permitted the use of antibiotics with good CNS penetration, which proved a decisive factor in the therapeutic success.

**Consent:** Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

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**P97**

Syphilitic encephalitis - a rare disease and a possible differential diagnosis of herpetic encephalitis

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BMC Infectious Diseases 2014, 14(Suppl 7):P97

**Background:** Syphilitic encephalitis is an atypical presentation form of central neural system infection by *Treponema pallidum*. There are only few case-reports in medical literature.

**Case report:** We present the case of a 41 year-old male, diagnosed with syphilitic encephalitis, in whom cerebral magnetic resonance imaging demonstrated preponderant involvement of bilateral temporal lobes, for this point of view raising differential diagnostic concerns with Herpes virus encephalitis. We also identified multiple encephalitis foci: hippocampus, lentiform nucleus, left thalamus, left midbrain, and bilateral occipital. The detection of herpes simplex virus DNA by PCR in CSF obtained at admission was negative. Furthermore, the subacute onset as a maniacal syndrome delayed the diagnostic, the patient being initially treated as psychiatric disorder in a Psychiatric Unit.

**Conclusion:** Although the clinical and imagistic evolution was favorable under specific optimal therapy, the patient had some neuropsychiatric sequels and is currently enrolled in a medical recovery treatment.

**Consent:** Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor of this journal.

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Cite abstracts in this supplement using the relevant abstract number, e.g.: Rogoz et al.: A case of hospital-acquired GNB infection - *P. aeruginosa* meningoencephalitis post laparoscopic cholecystectomy for biliary pancreatitis, complicated with portal vein branch thrombosis and intracerebral ischemic and hemorrhagic lesions. **BMC Infectious Diseases** 2014, 14(Suppl 7):P98