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Session: Bacterial Infections
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Time: 12:45-14:15
Room: Ballroom

Management of MDR-TB at the University Hospital of Kinshasa

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Background: MDR-TB is agreat concern in the fight against TB in many underdeveloped countries.

To assess the management of MDR-TB at The University hospital of Kinshasa.

Methods & Materials: Retrospective analysis of charts of patients with drug resistant TB admitted at the Kinshasa University hospital from January 1st to december 31st 2006.

Results: Out of 256 with chronic TB, 76 has performed a culture for sensitivity test and 45 (59.21%), predominantly aged between 20 and 49 years old, wherereally MDR-TB. The main treatment regimen applied was the combination of Kanamycine+ Ofloxacine+ Prothionamide+ Ethambutol+ Pyrazinamide, with recovery in 51,3%,and mortality rate of 22.86%%. Treatment failure was observed in 5.71% of patients; and sputum culture conversion at the 3rd month of treatment was 51.7%.

Conclusion: MDR-TB screening is still weak in our milieu. The standardized treatment regimen seems to be accurate with a good bacteriological conversion after a 3 months treatment.

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The new PCR-protocol for identification of *Salmonella spp.* and typing of *S. enteri*ca *enteritidis*, *S. enteri*ca *typhimurium*, *S.typhi*, *S. dublin*, *S. gallinarum* in the food safety system

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Background: Salmonellosis is one of the most dangerous diseases that is caused by Salmonella agents, and has a wide spectrum of clinical manifestations - from asymptomatic to severe septic forms. In the majority of Salmonella infection cases, the enterica subspecies serovars are isolated from animals and humans. According to the FAO, 20% of poultry products in the world are contaminated with salmonella. Every year on the planet 21 million cases of typhoid fever are registered where 216 thousand are lethal. Traditional microbiological methods for Salmonella typing (cultivation) is usually stretched out in time. This necessitates the development of modern methodology of food safety.Goal: Development of a multiplex PCR protocol enabling identification of *Salmonella spp*. and typing of *Enterisa Salmonella Enteritidis, Salmonella Enterisa Typhimurium, Salmonella Typhi, Salmonella Dublin, Salmonella Gallinarum.*

Methods & Materials: For amplification the following primers were used: Salmonella spp.: Salm3-Salm4 (Ferretti, 2001); Salmonella enteritidis: SentF-SentR (Agron, 2001); Salmonella typhimurium: StypF-StypR (O'Regan, 2008); Salmonella Typhi: StyphiF-StyphiR (Kumar, 2008); Salmonella Dublin: SdubF-SdubR; Salmonella Gallinarum: SgalF-SgalR (Akiba, 2011).

Optimization of multiplex PCR protocol was performed according to Elnifro (Elnifro, 2000).

Results: To determine optimal PCR temperature options, the assay was performed at different temperatures of primers annealing: 58 °C, 60 °C, 63 °C and 65 °C. The result of this was to determine the best amplification mode: Initial denaturation - 94 °C-2 min; Denaturation - 94 °C-45s; Annealing - 63 °C-45s; Extension - 72 °C-60s (40 cycles); Final extension - 72 °C-5 min. The optimal composition of the reaction mixture for multiplex PCR was: 10 × DreamTaq Buffer2,5 μl, dNTP Mix, 2 mM each 2,5 μl, 25 mM MgCl2 0,5 μl, Primers 20pM, Template DNA 5,0 μl, DremTaq DNA Polymerase 2,0 μl Water, nuclease-free 3,5 **μl**. The resulting protocol allowed the detection of DNA in the *Salmonella spp*. samples as well as the simultaneous typing of *Salmonella Enterica Enteritidis, Salmonella Enterica Typhimurium, Salmonella Typhi, Salmonella Dublin, Salmonella Gallinarum*. At the same time with PCR amplification, the simultaneous amplification of all the 6 expected fragments occurred.

Conclusion: The developed protocol is promising for the biological control of food safety, as well as in routine investigations.

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Aetiology of community-acquired pneumonia in HIV-infected South African adults

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Background: Few recent comprehensive studies are available on the aetiology of community-acquired pneumonia (CAP) in HIV-infected adults which include bacterial and viral organisms in developing countries.

Methods & Materials: Induced sputum, blood cultures, urine, nasopharyngeal swabs (NPS) and aspirates (NPA) were collected from HIV-infected adults hospitalized with radiologically confirmed pneumonia with symptoms of ≤14 days not currently