Methods: Chemiluminiscent immunometric assay was used for IL-6 (IL-6 Immulite, DPC) and LBP (Immulite LBP, DPC) determination, immunoluminometric assay for PCT (LUMItest PCT) and immunoturbidimetric for CRP (QuickRead CRP, Orion Diagnostica) determination. Diagnostic accuracy for each parameter was assesed by ROC curve analysis (AUC). Statistical analysis was performed using MedCalc for Windows, version 5.0.

Results: Forty patients (21 girls, 19 boys) with the median age of 5.6 years (range 0.5 - 19.9) experienced 82 episodes of FN. Underlying disease was hematologic in 55 and solid tumor in 27 episodes. Bacteremia was confirmed in 16 (19.5 %) episodes; Gram negative in 8, Gram positive in 7 and combined in 1 episode. The fever was due to local infection in 14 (17 %), viral in 9 (11 %), whereas in 41 episodes (50 %) the cause could not be identified (FUO).

On day 1 the best diagnostic accuracy (AUC) was seen for IL-6 (0.765) followed by CRP (0.738), LBP (0.696) and PCT (0.666). On day 2 CRP had the best diagnostic accuracy (0.824), followed by IL-6 (0.753), PCT (0.695) and LBP (0.685).

Conclusions: New inflammatory markers did not show advantage over CRP, except for IL-6 on the first day.

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USE OF MEROPENEM IN NEONATAL SEVERE INFECTIONS CAUSED BY MULTIRESISTANT GRAM NEGATIVE BACTERIA

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Aims: Numerous non randomised studies published recently have suggested that the meropenem may be useful and safe antibacterial agents in neonatal severe infections caused by multi drag resistant (MDR) organisms. The aim of our report is to demonstrate the efficacy of meropenem in the treatment of severe infections in the newborns due to this organisms.

Methods: We reported the use of meropenem in 23 neonates, gestational age of 30. to 39. weeks and birth weight of 1250 - 3100 grams with severe infections due to MDR Escherichia coli, Klebsiellae pneumoniae and Serratia spp. Bacterial patogenes were isolated pretreatment in 14 of patients and all were susceptible to meropenem in vitro. Meropenem in dose of 20 mg/kg was administrated i.v. in 60 min infusion every 8-12 hours during 10-14 days as monotherapy as a second choice because of deterioration during conventional treatment.

Results: Clinical and bacterial response rate for meropenem were 100% for pneumonia , ITU and septicaemia , and 96% for NEC. One died. The incidence of drug related adverse events (mostly a slight decrease in number of thrombocytes) was 13.0% . No adverse events such as vomiting, diarrhea, glossitis, moniliasis, thrombocytosis, severe thrombocytopenia, eosinophylia, impairment of liver and renal function, rush, thrombophlebitis, Staphylococcus epidermidis colonisation and sezaures were observed.

Conclusion: These results demonstrate the efficacy of meropenem in the treatment of severe infections in newborns due to multiresistant gram-negative bacteria and can be used as appropriate empirical therapy and lead to improved outcome.

Keywords: Meropenem, newborn, nosocomial infections.

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BLOOD CULTURE ISOLATES DURING ONE YEAR IN A CENTER OF NEONATOLOGY IN MONTENEGRO

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Septicemia is the leading cause of acquired illness among neonates. Prompt and effective antimicrobial therapy plays the most important role in the success of treatment. The purpose of this study was to identify the major organisms cultured from septicemic newborns at the Institute for Children Diseases in Montenegro. The study included 770 cases of clinically suspected neonatal septicemia admitted in the Center for Neonatology of Institute for Children Diseases in Montenegro during the period from March 2009 to March 2010. Blood samples were collected with all aseptic precautions for culture and sensitivity studies. Blood cultures were processed