for foetal distress in one of the twins. Mother was Gravida 3 Para 2 with no known medical illness and normal antenatal scans but was colonised with Group B Streptococcus. The twins were born in good condition but needed ventilation soon after birth.

Twin 1 was extubated after 24 hours of ventilation. She deteriorated and had to be re-ventilated and was treated for possible meningitis. Her initial ECHO showed large PDA with left ventricular overload and the PDA was medically treated. She deteriorated further and ECHO at this stage showed severe left ventricular dysfunction with Pulmonary Hypertension requiring inotropes to maintain BP. ECG showed significant ST changes and troponin was significantly raised suggesting myocardial injury. Repeat ECHO showed dilated hypokinetic left ventricle, tense left atrium and bulging right atrium.

Twin 2 was also extubated after brief ventilation. She had to be re-ventilated because of significant pulmonary haemorrhage. She was haemodynamically unstable needing Inotropes and initial ECHO showed large PDA with high pulmonary pressures. She then developed recurrent narrow complex tachycardia. Repeat ECHO showed poor left ventricular function, left atrium and left ventricle moderately dilated, good right ventricle function. ECG showed gross ST changes.

Both the twins died of poor cardiac function with no output. Post mortem in both of them showed macroscopic and microscopic changes only in Left side of the heart with right side remaining unaffected.

Enterovirus DNA was detected in serum by PCR.

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PREDICTED AND MEASURED PAGIBAXIMAB SERUM LEVELS IN HIGH-RISK NEONATES

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Pagibaximab, a monoclonal antibody for prevention of staphylococcal sepsis in VLBW infants reported no staphylococcal sepsis when serum levels were ≥500ug/ml. Prior to phase 3 studies, we sought to develop a dosing scheme to maintain pagibaximab serum levels ≥500ug/ml for 35 days in VLBW infants. Serum levels from 100 VLBW infants infused with pagibaximab 10 to 90 mg/kg, for one to three doses were used to develop a pharmacokinetic model and dosing regimen. This regimen was prospectively evaluated in planned and scavenged samples obtained for 35 days from VLBW infants infused with pagibaximab. Observed and predicted pagibaximab levels were compared. The pharmacokinetics described the concentration time course of pagibaximab as a two compartment model with linear central compartment elimination. Pharmacokinetic parameters from this model were (mean±SE): Cl (ml/h) 0.446, Vl 75, V2 138, C0int 12.3, Ke 0.000836, t1/2 15.4 days. Using this model a dosing scheme of 100mg/kg daily for 3 days and then weekly for 3 weeks was developed to maintain target levels. Observed pharmacokinetic estimates from infants who received this regimen from both scavenged and planned samples were similar and as predicted by the model. Inclusion of scavenged samples caused some model instability due to lack of accurate sampling times. In either set of samples, all serum levels were ≥500 ug/ml. We developed a dosing regimen for pagibaximab in VLBW infants to maintain serum levels of ≥500ug/ml and prospectively confirmed this regimen. Phase 3 studies can proceed with confidence that pagibaximab target levels can be achieved and maintained.

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PROCALCITONIN, INTERLEUKIN-6, LIPOPOLYSACCHARIDE-BINDING PROTEIN AND C-REACTIVE PROTEIN IN THE DIAGNOSIS OF SEPSIS OF FEBRILE NEUTROPENIC CHILDREN

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Background and aims: The diagnosis of sepsis in children with febrile neutropenia (FN) remains difficult. The aim of the study was to evaluate the role of procalcitonin (PCT), interleukin-6 (IL-6), lipopolysaccharide- binding protein (LBP) and C-reactive protein (CRP) in the diagnosis of bacteremia and sepsis of children with FN .

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