

Aim The aim of this study was to determine the incidence of (Healthcare-associated infection) HAI, causative organisms, associated risk factors in a neonatal intensive care unit in Turkey.

Methods A prospective cohort study was conducted on patients admitted to the neonatal intensive care unit (NICU) from July 2011 to June 2012. The criteria that were used to diagnose infection were in accordance with the Centres for Disease Control and Prevention. The incidence, causative organisms, risk factors and mortality of healthcare-associated infections were assessed.

Results The study included 352 patients, 37 of these developed HAIs, totaling 60 HAI episodes. Overall HAI patient rate was 17.04%, and 11.51 HAIs per 1000 NICU days. The most frequent HAIs were bloodstream infections (70%) and nosocomial pneumonia (18.3%). The central venous catheter/umbilical catheter-related bloodstream infections (CVC/UC BSIs) rate was 18.3/1,000 catheter days; the ventilator-associated pneumonia (VAP) rate was 13.6/1,000 ventilator days; and the catheter-associated urinary tract infections rate found was 14.9/1,000 catheter days. Prematurity, gestational age less than 32 weeks, birth weight < 1500 g, mechanical ventilation, use of CVC/UC, use of urinary catheter, and total parenteral nutrition appeared to be associated with a significantly higher risk of HAI ($p \leq 0.05$). The most frequent pathogens were *Enterobacter spp.* (18.5%) and *Acinetobacter baumannii* (13.8%). Overall mortality rate in neonates was 3.9%, and the mortality rate in neonates with HAI was 10.8%.

Conclusions Healthcare-associated infection rates of our NICU were higher than international standards. The decrement of risk factors in newborns would help to improve the outcome.

PO-0517 FIRST REPORTED CASE OF REPEATED SUBCUTANEOUS ADMINISTRATION OF PALIVIZUMAB IN A FORMER PRETERM INFANT

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Background and aims Intramuscular injection is contra-indicated in patients with bleeding disorders. In these cases, the unlicensed practice is to administer vaccines by subcutaneous route. Despite extensive literature search and communication with the manufacturer, we were unable to retrieve any reported experience with palivizumab. Supported by a mathematical description (Zhao L *et al. J Clin Pharmacol* 2013) for subcutaneous or intramuscular administration of monoclonal antibodies, we decided to administer palivizumab by subcutaneous route and to document the effects. Parental informed consent was obtained.

Methods Prospective registration of tolerance and effects of subcutaneous palivizumab administration in a former preterm girl with von Willebrand, type 2B. Spare plasma samples (peak and trough levels) were also collected, but analysis was not possible since we had no access to a valid quantification technique.

Results The girl received 5 monthly subcutaneous injections (15 mg/kg) and was subsequently monitored for 1 h for systemic and local side effects with further evaluation of tolerance by the parents. Local tolerance of palivizumab (tenderness, swelling) was much better when compared to the simultaneously administered (Infarix Hexa, or Prevenar subcutaneous) vaccines. She never displayed RSV-related symptoms.

Conclusions Repeated subcutaneous injection of palivizumab was tolerated well with minor local reactions and no systemic side effects. We suggest to consider the subcutaneous instead of the intramuscular route in the setting of a valid indication for palivizumab, but an contraindication for intramuscular administration. Off-label or unlicensed practices should be reported to share and improve knowledge on pharmacotherapy.

PO-0518 THE INCIDENCE AND THE MICROBIAL PATTERN OF NEONATAL SEPSIS IN JORDAN

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Introduction Neonatal sepsis is a common and potentially serious neonatal disease especially in preterm babies and more complicated in developing countries.

Objectives To study the incidence and the microbial pattern of neonatal sepsis in our unit in Amman/Jordan.

Method A retrospective study of all newborn cases admitted to our NICU as suspected sepsis over a 4-year period, 2001–2004 analysing the results of blood cultures.

Results The total number of newborns delivered in our NICU over a 4-year period was 25715.

- 819 (3.2%) babies were admitted as suspected sepsis. *616 (75%) were full term babies. *203 (25%) were preterm babies (28 to 36 weeks)

- The total culture-proven cases (positive blood cultures) were 51 (6.2%).out of which 21(40%) cases were preterm babies. So culture-proven sepsis was found in about 10% of preterm babies and in about 5% of full term babies who were admitted as suspected sepsis.

- The overall incidence of sepsis was 2 per 1000.

- Gram negative organisms recovered in 32 cases (63%), mainly Klebsiella species in 21 cases (40%), E.coli in 7(14%)and Pseudomonas in 4 cases (8%).

- Gram positive cases were 19(37%) : Staphylococci aureus in 7 cases, Staph. Epidermidis in 4, GBS in 5 and Strept.viridans in 3 cases.

The mortality among all culture-proven cases was 2 cases (4%).

Conclusion - A bout 3.2% of all newborns were admitted as suspected sepsis.

- Only 6% of suspected cases of sepsis were proven culture positive-The overall incidence of neonatal sepsis in our unit is 2/1000.

- Klebsiella species is the commonest pathogen isolated in our NICU.

PO-0519 CAN BASE EXCESS BE USED FOR EARLY DIAGNOSIS OF NEONATAL SEPSIS IN PRETERM NEWBORNS?

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Background and aims Neonatal sepsis remains an important and potentially life-threatening clinical syndrome and a major cause of neonatal mortality and morbidity, particularly in preterm infants. The aim of this study to investigate whether values of

base excess before the onset of clinical signs and symptoms of sepsis indicate infection in the early diagnosis of neonatal sepsis.

Methods A total of 118 infants were enrolled. The infants were classified into two groups: group 1 (sepsis, n = 49) and group 2 (control, n = 69). Blood gas analysis investigated for screening of neonatal sepsis.

Results A total of 49 infants with neonatal sepsis and 69 healthy controls were enrolled. A comparison of markers of sepsis revealed C-reactive protein, interleukin-6 level to be significantly higher and pH, pCO₂, HCO₃ and base excess values to be significantly lower in newborns with sepsis compared healthy controls (p < 0.01). The optimum cut-off value in the diagnosis of neonatal sepsis was found to be -5 mmol/L for base excess. Sensitivity, specificity, positive predictive value and negative predictive value of this base excess cut-off for neonatal sepsis were 75, 91, 86 and 84% respectively.

Conclusions This is the first study to determine the relationship between the decrease value of base excess and early stage of neonatal sepsis. If the value of base excess <-5 mmol/L without an underlying another reason, may need close follow up of infants for neonatal sepsis and it may help early diagnosis.

PO-0520 NEONATAL MENINGITIS DUE TO MORAXELLA OSLOENSIS; CASE REPORT AND REVIEW OF THE LITERATURE

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Introduction Neonatal meningitis causes substantial morbidity and mortality and is commonly caused by GBS. *Moraxella osloensis* is an aerobic, gram-negative coccobacillus infrequently isolated from CSF. There is little published related to risk factors of *M. osloensis* infections in the paediatric population. We report a case of *Moraxella meningitis* a neonate and review of cases in children.

Case report A 2 day old neonate was referred for jaundice and bilirubin check. He was noted to be jaundiced and lethargic. He was born at term complicated with maternal pyrexia and raised maternal inflammatory markers. He was discharged on day1 following 12 h of satisfactory observation.

A full septic screen was performed on the baby in-view of risk factor for sepsis. The biochemical work-up was suggestive of meningitis. The blood and CSF culture were negative; however the CSF PCR was positive for *Moraxella Oslonesis*.

Abstract PO-0520 Table 1 Laboratory Investigations:

Investigations:	Day1 of admission	Day3 of admission	Day10 of admission
CRP	10	6	<1
Bilirubin	192	176	22
Blood Neutrophils	5.4	4.6	3.7
Platelets	129	206	454
CSF glucose	1.5		
	Lymphocytes - 10%		
	Polymorphs-90%		
	Red blood cells -40,320/cu.mm		
CSF Microscopy	White blood cells -133/cu.mm		
Blood culture	No growth		
CSF culture	No growth		
CSF PCR	Moraxella. oslonesis		

He was treated with 3 week course of IV cefotaxime and discharged without any acute complications.

Discussion A PubMed search yielded 4 published cases of *M. osloensis* meningitis but none of them presented in the neonatal period. There was 1 published case of neonatal septicemia without meningitis, however there was no specific risk factor identified in any of these patients.

In conclusion, although *M. osloensis* meningitis is rare it may cause severe CNS infection in children we were able to definitely identify the species of the isolates only by using 16S rRNA gene sequencing and extended PCR must be performed on all babies presenting with possible meningitis.

PO-0521 AUDIT OF MANAGEMENT OF NEONATES PRESENTING WITH SUSPECTED SEPSIS AND/OR MENINGITIS

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Introduction Sepsis is a significant cause of mortality and morbidity in neonates. Diagnosis can be challenging as clinical features are nonspecific and the diagnostic tests have poor predictive accuracy.

Objectives To identify incidence of sepsis, risk factors and clinical presentation, sensitivity pattern of organisms, management and compare with local guidelines.

Project methodology Retrospective case notes analysis of babies up to 28 days age and presenting with features of sepsis during August 2011 to July 2013. Data collected on risk factors, clinical presentation, management and outcome.

Results 23 out of 88 babies had blood, urine or CSF positives for viral or bacterial organisms of which 11 were true positives. Significant number of babies presented with nonspecific symptoms. Risk factors for neonatal sepsis were not always documented. A significant number did not have urine or CSF cultures prior to starting antibiotics (urine 54% and CSF 77%). The total number of contaminants was 12/23 of which Coagulase negative staph was predominant.

Of the 12 true positives 3 had bacteraemia (1 died), 1 had positive Group B streptococcus both in blood and CSF (died), 5 had urinary tract infection and 2 had CSF viral PCR positive (1 died).

Of the 9 various antibiotic combination used the most commonly used combination was Cefotaxime/Amoxicillin/Gentamicin (73%).

Conclusion The audit identified following areas for improvement:

- documentation of perinatal events,
- performing vital investigations like CSF and urine culture before starting antibiotics and ensuring strict aseptic technique in blood and CSF culture.

PO-0522 GENERALISED BULLOUS IMPETIGO IN A NEONATE DUE TO METHICILLIN-RESISTANT STAPHYLOCOCCUS

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