Background and Aim Serum bilirubin measurement is still the cornerstone method to assess hyperbilirubinemia in NN this method is invasive, painful, costly, needs more than one prick and may need to anemia due to repeated blood sampling.

Aim To compare trancutaneous bilirubin measurment with serum bilirubin.

Patients and Methods An average of three readings at different sites on the skin of NN using the bilirubinometer was taken babies included were FT, with indirect hyperbilirubinaemia, not exposed to phototherapy. Blood samples were collected at the same time for comparison.

Results A total of 101 measurements for each method were performed 67 babies were > 2.5 kg, 34 babies were < 2.5 kg. Age range was few hrs to 14 days.

There was excellent matching between the two methods of bilirubin measurement regardless of gestational age, birth weight, sex, post natal age.

Conclusion Transcutaneous bilirubin measurement is an alternative reliable way to assess hyperbilirubinaemia that avoids the drawbacks of blood sampling It is highly recommended in OPD, ER, NNU.

1330 ASSOCIATION OF TRANSCUTANEOUS CARBON MONOXIDE AND BILIRUBIN LEVELS IN HEALTHY TERM NEWBORNS

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Background and Aims End tidal measurement of carbonmonoxide (CO) as a side product of hemoglobin turn over may be an indicator of bilirubin production and hemolysis. We aimed to evaluate the association of transcutaneus CO measurement and bilirubin levels in healthy term newborns as an alternative to end tidal CO.

Methods A total number of 390 infants were recruited in the study. Infants who were born in our hospital (n=340) were followed by daily transcutaneus CO and capillary bilirubin measurements starting from birth to discharge. Remaning 50 infants were admitted for hyperbilirubinemia treatment after 72 hours of life. Transcutaneous CO measurements were done by Masimo pulse oxymeter.

Results Capillary bilirubin and transcutaneus CO levels on 24 and 48 hours of life were positively correlated (Spearman correlation coefficients $r=0.21$ and 0.87 respectively, p values for both analyses < 0.001). Bilirubin levels and transcutaneous CO measurements were levels were also positively correlated in infants admitted for hyperbilirubinemia (Spearman correlation coefficient $r=0.41$, $p<0.001$).

Conclusion Our data showed positive and statistically significant correlations between bilirubin and transcutaneous CO measurements not in only healthy term newborns but also in newborns with hyperbilirubinemia. Therefore transcutaneous CO measurement deserves attention in order to obtain threshold levels for prediction of severe hyperbilirubinemia.

1331 PERCUTANEOUS TRANSHEPATIC ULTRASOUND-GUIDED CARDIAC CATHETERIZATION IN A FETAL LAMB MODEL

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Background Fetal cardiac intervention may alter the progression of cardiac conditions. Fetal heart access by direct puncture of the fetal heart under ultrasound guidance has been established, but with considerable technical difficulties. We aim to investigate the feasibility of fetal cardiac access using a percutaneous transhepatic approach in the mid-gestational fetal lamb, as a model for human fetus.

Method Eight fetal lambs of 95–97 days gestation (term 147 days) were studied. Under ultrasound guidance, the fetal right hepatic vein was punctured percutaneously, using a 16GA intravenous cannula (BD Angiocath). A coronary catheter (FineCross™ MG, Terumo) was inserted into the 16 GA cannula, over a 0.014inch guidewire, and advanced into the inferior vena cava and the right atrium. Contrast was injected to document position of the catheter. Three fetal lambs were to be euthanized at the end of the procedure to evaluate blood loss. The rest were to deliver vaginally at term, and euthanized for postmortem examination.

Results Percutaneous fetal cardiac access was successful in 7 out of the 8 fetuses. All 4 heart chambers were catheterized in the last 3 fetuses. One fetus died during the procedure, post-mortem showed pericardial and peritoneal haemorrhage. The other two fetuses dedicated for immediate post-mortem, after having survived the procedure, had small haemoperitoneum. Averaged fetal weight was 1027±153g. All other lambs were born normally at term.

Conclusion Ultrasound-guided fetal cardiac catheterization through a percutaneous transhepatic approach is feasible. Our experience provides a potentially safer route for human fetal cardiac intervention at midgestational age.

1332 PREVALENCE OF ENTERIC COLONIZATION WITH VANCOMYCIN-RESISTANT ENTEROCOCCI IN INTENSIVE CARE UNITS IN SHIRAZ, IRAN

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Background and Aims Vancomycin-resistant enterococci (VRE) are among the most feared hospital pathogens. The present nested case-control study aimed to determine the prevalence and risk factors of enteric colonization of VRE in ICUs in a tertiary hospital in Iran.

Methods Serial rectal swabs were obtained every five days from all hospitalized patients (70 cases) in six ICUs and one CCU until patient's discharge. During the study 100 samples of rectal swab in sterile situation were taken. Then enterococci detection and susceptibility were done by disk diffusion and MIC dilution method.

Results A total of 9 of the 70 patients (12.85%) were colonized with VRE. five patients who had at least a negative test for VRE - at the time of hospitalization- were colonized with resistant enterococci which demonstrated an incident rate of colonization as 7% at three months of study period. Univariate analysis showed that prior antibiotic consumption, vancomycin and third generation cephalosporins, and duration of vancomycin use were significant risk factors for VRE colonization(p<0.05). There were no significant association between prevalence of VRE and variables such as age, ward, history of admission, history of antibiotic use, duration of hospitalization and underlying disease (p>0.05). The logistic regression showed that the consumption of vancomycin was the independent risk factors for VRE colonization.

Conclusions Prevalence of VRE in ICUs in the present study was high in consistence with national studies confirming that this organism might be endemic in tertiary large hospitals in Iran.

1333 CLINICAL MANIFESTATIONS OF URINARY TRACT INFECTIONS IN NEWBORN INFANTS ADMITTED TO NEONATAL INTENSIVE CARE UNIT

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Background and Aims To determine the demography, clinical manifestations and the most common organism isolated of the urinary tract infection (UTI) in the newborn infants who were admitted to the neonatal intensive care unite (NICU).

Methods Newborn infants diagnosed with UTI were investigated retrospectively, clinical and demographic characteristics of infants were collected from the medical records in the NICU. Urine cultures were obtained by suprapubic aspiration or urinary cathater.

Results Fifty-one infants were included in this study. The mean (±SD) gestational age and weight of infants were 31.53±4.32 weeks, and 1724.90±902.21 g respectively. Male patients accounted for %56.9 of the study group. Infants born with cesarian section were %86.3. The median age for the urine culture was 31.53±4.3days. Klebsiella pneumania was the dominant microorganism isolated in 22 patients (43.13%), followed by Escherichia coli in 13 patients (25.4%). The most common presenting symptoms were vomitting in 39(76.5%) infants, desaturation in 34 (66.7%) infants, tachycardia in 31 (60.8%) infants, apnea in 21 (41.2%) infants and jaundice in 18 (35.3%) infants.

Conclusions The incidence of UTI in newborn infants is 0.1–1% and it can be as high as 10% in low-birthweight and preterm babies. The presentation of UTI in the neonatal infants is non-specific and the most common clinical manifestations are vomitting, fever, enteral feeding intolerance, apnea and bradycardia. In this study, desaturation and tachycardia are also shown as presenting manifestations of UTI. Klebsiella pneumania was the dominant microorganism isolated in 22(43.13%) patients in our study.

1334 EFFECTS OF INTRAPARTUM ANTIBIOTIC PROPHYLAXIS ON NEWBORN MICROBIOTA

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Background and Aims Group B *Streptococcus* (GBS) early-onset bacterial sepsis is an important cause of neonatal morbidity and mortality. In the last decade, after the introduction of intrapartum antibiotic prophylaxis in pregnant women during labor and delivery, the sepsis-associated death rates have declined. The aim of this study is to evaluate the effects of antibiotic treatment of pregnant women GBS-positive on early colonization of bacteria in the newborn gut, which is known to be related to immunity development.

Methods Thirty-four vaginal delivered and breastfed newborns were enrolled; 17 had mothers GBS-positive treated with 2g of Ampicillin and 17 had mothers GBS-negative (control group).

Two-hundred milligrams faeces were collected for each subject and processed for DNA extraction, performed with QIAamp DNA Stool Mini Kit [Qiagen, Cat. No. 51504]. *Lactobacillus* spp., *Bidobacterium* spp., *Bacteroides fragilis* group, *C. difficile* and *E. coli* quantification was obtained with real-time PCR. Data of microbial counts were subjected to one-way variance analisys in order to evidence significant differences between treated and control group of newborns.

Results Antibiotic therapy reduced the intestinal colonization of *Bifidobacterium*: 5.51 Log(CFU/g) in treated samples against 7.07 Log(CFU/g) in control samples; P<0.05.

All the others microbial genera and species analysed were not affected by the maternal treatment with Ampicillin.

Conclusions Preliminary results showed a decrease of early Bifidobacterium count in the microbiota of newborns; the clinical

meaning or the effect on newborn immunity need to be investigated with larger studies.

1335 EFFICACY OF PROPHYLACTIC FLUCONAZOLE IN REDUCING CANDIDEMIA IN HIGH RISK NICU AND PICU PATIENTS

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Background Candidal infection is a common cause of morbidity and mortality in neonatal intensive care unit (NICU) and pediatric intensive care unit(PICU) pateints, especially those with risk factors.

Objectives To determine the prevalence of Candida species in risky NICU and PICU patients and evaluate the efficacy of prophylactic Fluconazole in reducing Candida colonization and subsequent invasive candidemia in those patients.

Design Prospective, randomized, double blind placebo controlled clinical study.

Setting Tertiary level intensive care units at pediatric department.

Subjects 80 intensive care unit high risk group patient of neonatal and pediatric age.

Intervention Children were randomly grouped during first three days to receive either Fluconazole or placebo till 28 days or less, if discharged or died earlier. Weekly surveillance cultures from oropharyngeal swabs, urine, stool, sputum (when available), and blood.

Results Baseline risk factors for Candida infection in Fluconazole and Placebo groups were similar. Candida colonization was reported in 35 patients (87.5%) in the placebo group which was significantly higher (P =0.0001) than that detected among patients in the Fluconazole treated group [10 patients (25%)]. fluconazole treated group showed significantly lower colonization with Candida albicans (C. albicans) and higher colonization with non Candida albicans (non-C. albicans)versus placebo group. Invasive Candida infection was significantly higher (P=0.03) among placebo group than Fluconazole treated one. Invasive non-C. albicans infection was reported in 9/13 patients [6 patients (66.6%) in Placebo group and 3 patients (33.3%) in Fluconazole treated group].

Conclusion Prophylactic Fluconazole in risky patients in ICU is effective in reducing Candida colonization but not invasive candidemia.

1336 POSTNATAL SERUM CREATININE TRENDS IN NEONATES: JAFFE COMPARED TO ENZYMATIC QUANTIFICATION TECHNIQUE

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Background Serum creatinine (Scr) reflects to a certain extent GFR in neonates, but postnatal observations also depends on the technique used (Jaffe colorimetry or enzymatic quantification) as recently quantified in ELBW neonates (1.2). We aimed to assess the impact of enzymatic versus Jaffe quantification and to describe postnatal Scr trends for both techniques in neonates with higher birth weight (3).

Methods Scr values quantified by Jaffe in 1140 neonates were compared to values obtained by enzymatic quantification in 1023 neonates in one NICU. All Scr values collected in the first 42 days of postnatal life were included and postnatal trends for cohorts < 1kg, 1–2 kg, 2–3 kg and > 3 kg were compared.

Results Postnatal patterns were similar between both techniques, with an initial increase of Scr (highest and last in the smallest neonates) in early postnatal life, and a subsequent decrease, most