P629 NEONATAL SUBCUTANEOUS FAT NECROSIS A FIVE CASES STUDY

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Introduction Neonatal subcutaneous fat necrosis is a rare condition. It's due to a transient panniculitis and present as an erythematous nodules and indurate plaques over bony prominences that appears in the first weeks of life. We aim to identify the risk factors, clinical aspects, and outcomes of this rare condition.

Methods It's a retrospective study including five cases of subcutaneous fat necrosis hospitalized in the neonatal intensive care unit of Sfax between 2016 and 2019.

Results Two boys and three girls were registered. Only one newborn was a preterm of 35 weeks of amenorrhea. Two mothers had gestational diabetes and the others had uncomplicated pregnancies. Four newborns presented birth asphyxia requiring resuscitation in the delivery room. The median 1 – 5 minutes Apgar scores were respectively 5.8 – 7.5. Three newborns were macrocosmic. The others had a normal birth weight. Subcutaneous fat necrosis lesions were noticed by the two first weeks of life in all cases with a mean of 7.4 days (4 to 18 days). All newborns had diffuse skin lesions. It was mainly localized on the sacro-coccygeal region, back, shoulders and limb roots. All skin lesions resolved spontaneously within two to three months except for one newborn who presented a liquefaction of the content of one of his lesions by the day 11 of life. It was a median lesion measuring 6*10 cm localized in the back. Monitoring and laboratory analysis showed thrombocytopenia that preceded the onset of the lesions in all cases. It was severe in 3 cases with an average of 40 000 (27 000 to 58 000). Three newborns developed hypercalcemia. It was severe for only one newborn with a serum level reaching 4.42 mmol/L by day 30 of life. Follow up showed associated nephrocalcinosis in two cases and metastatic skin calcifications in one case. For the newborn with severe hypercalcemia, as initial treatment he received low calcium and vitamin D formula, hyperhydration, intravenous methylprednisolone and furosemide. Due to a lack of response, we started treatment with pamidronate with a favorable evolution. Normalization of the serum calcium level as well as the renal ultrasound was finally obtained by the age of 4 months.

Conclusion Subcutaneous fat necrosis is a self-limited condition with a good prognosis generally. However, it may be associated to rare but serious complications especially thrombocytopenia and hypercalcemia. A long term clinical and biological follow-up for the possible onset of these complications is then necessary.

P630 NON INFECTIOUS COMPLICATIONS RELATED TO CENTRAL CATHETER IN NEONATES (A STUDY OF 8 CASES)

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Introduction The use of central catheters in the neonatal period is essential for the management of neonates with vital distress or premature newborns. Nevertheless it can be associated to serious complications specially related to leakage of parenteral nutrition.

Methods It's a retrospective study of all cases of non infectious complication related to central catheter registered in the neonatal intensive care unit of Sfax between 2012 and 2018.

Results We registered 5 cases of pericardial effusion, one case of pleural effusion, one case of ascites and one case of pneumopericardium. All newborns were premature (29 to 33 weeks of amenorrhea). Five patients had epicutaneo-cave catheters, two patients had umbilical venous catheters and one had broviac catheter. The catheter position was intracardiac in all cases. The incident occurred in an average of 2.75 days after the catheter insertion (1 to 6 days). Clinical manifestations were no specific miming sepsis in almost all cases. Hemodynamic disorders with tachycardia, tachypnea and skin mottling were noticed in 4 cases of pericardial effusion. Three preterm newborns with tamponade presented moreover severe apnea. The newborn with ascites presented abdominal distension and tachypnea. Diagnosis was made by ultrasound exam in all cases related to leakage of parenteral nutrition. For the case of pneumopericardium diagnosis was made on chest radiography. Management consistent on oxygen administration associated to hemodynamic support all cases. An ultrasound-guide pericardium puncture was performed in four cases of pericardial effusion. The catheter was removed in five cases and repositioned in three cases. Outcome was favorable for all newborns.

Conclusion Clinician should be aware of the risk of leakage of parenteral nutrition. Thus every neonate with central catheter must be monitored and the extracardiac position of the catheter must be systematically verified.

P631 SCORE FOR NEONATAL ACUTE PHYSIOLOGY PERINATAL EXTENSION II (SNAPPE II) IN NEONATES WITH ACUTE KIDNEY INJURY

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Background Acute kidney injury is a serious clinical problem in neonatal intensive care unit. It is defined as a sudden decrease in kidney function resulting in derangements in fluid balance, electrolytes, and waste products. SNAPPE 2 score is a useful tool for assessing the severity of the disease that correlates with neonatal mortality.

Objective The aim of the study was to determine the incidence of AKI and the role of SNPPE 2 score in predicting mortality and morbidity in AKI in neonates.

Methods The study was designed as a prospective, clinical, epidemiological investigation conducted in the period of three years, which included 100 newborn infants (50 with AKI and 50 without AKI) hospitalized in NICU of University Children's Hospital. The severity of the illness of hospitalized newborn infants was estimated with SNAPPE 2 score realized in the first 12 hours of admission in NICU. Medical data records of admitted neonates with AKI were analyzed. The material was statistically processed using methods of descriptive statistics.

Results During the study period 770 newborns were hospitalized in NICU due to various pathological conditions and 50 newborns have been selected with AKI. As the control group, 50 newborns were taken with comparable associated pathological conditions, but without kidney injury. The calculated prevalence of AKI in neonates was 6.4%. Most of involved neonates in the study in both groups (AKI and non AKI) were born at term (64% and 54%) with predominance of male (68% and 60%). The mortality rate was higher in newborns with AKI than control group (36% vs 24%). In half of newborn infants with AKI predominate severe score level, while in control group predominate median score level (42%). There is a significant difference between the mean score value in neonates with AKI and lethal outcome compared to neonates with AKI without lethal outcome (70.73 ± 18.6 vs. 40.2 ± 16.6).

Conclusion Acute kidney injury is a life threatening condition with still high mortality rate. The severity of the illness of hospitalized newborn infants in NICU is estimated by SNAPPE 2 score. The high score level is associated with the severity of the disease and higher mortality. Appropriate treatment of newborns with severe kidney injury improves the outcome and reduces the mortality of the disease.

P632 MORBIDITY AND MORTALITY OUTCOMES IN NEONATES WHO WERE TRANSFERRED FROM TO THE NEONATAL INTENSIVE CARE UNIT IN SFAX-TUNISIA

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Background In view of the multiplicity of places of birth and the scarcity of neonatal intensive care units, the transfer of sick newborns is necessary in several situations in order to provide them with the necessary care not available at the birth places. This transport exposes the newborn to some risks that may affect morbidity and mortality.

Aims of the study To study the characteristics of transported newborns and the conditions of their transfer in order to identify the factors that can influence morbidity and mortality.

Methods Retrospective chart review: the medical records of 273 newborns transported and admitted in NICU over a period of 3 years, from January 1, 2012 to December 31, 2014.

Results The transfer rate during the study period was 6.4%. The private sector contributed in 57.5% of the transfers while the rest of the cases were originated from the peripheral maternities (25.2%). The main reasons for transfer were neonatal respiratory distress (62.3%), neonatal infection (43.2%) and prematurity (24.2%). Surgical diseases (or other malformations) were addressed mainly from peripheral maternities with a significant difference compared to the private sector. 89.4% of cases were transported in an ambulance with a very limited equipment (incubator, oxygen cylinder, rarely a scope) and in the presence of a single nurse and exceptionally a doctor. Incidents occurred during the transfer and were observed in 6 cases: accidental extubation, depletion of the oxygen cylinder. Complications were observed in 48.4 of the cases, the main one was iatrogenic infection (19.75%). The death rate was 13.6%: this rate is influenced by hypoglycaemia, hypoxia, surgical diseases and the use of mechanical ventilation.

Conclusion The severity of the initial neonatal pathology conditioned the prognosis of the newborns transported which is also influenced by the conditions of the transport.

P633 NON-CATHETER-RELATED NEONATAL AORTIC THROMBOSIS REVEALING AN ASSOCIATION OF FACTOR V LEIDEN AND HYPERHOMOCYSTEINEMIA

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Introduction Non-catheter-related aortic thrombosis is a rare condition in neonates. It may be life threatening or leads to severe complications. It occurrence requires looking for an underlying congenital prothrombotic condition.

Methods We report a case of a spontaneous aortic thrombosis in a newborn revealing an association of factor V Leiden and hyperhomocysteinemia.

Results A full term male was born by c-section. He presented immediate severe respiratory distress. Echocardiography performed at the second day of life, showed persistent pulmonary hypertension. He required high frequency oscillatory ventilation and inhaled monoxide administration. Initial respiratory stabilization was noted. But at 11 days age, we noted an increase in oxygen requirement; a tachycardia, a hepatomegaly, an edema and femoral pulses were no more detected. Control echocardiography showed a left ventricular dysfunction with an ejection fraction of 30%. The abdominal doppler ultrasound found an extensive thrombosis in infrarenal abdominal aorta. Thrombolytic treatment was not administrated as a sub-arachnoid hemorrhage was found in the cerebral ultrasound. After 48 hours of mechanical ventilation and inotropic support, hemodynamic and respiratory stabilization was obtained. Control echocardiography at day 14, showed an ejection fraction of 50%. The biological assessment revealed heterozygosis R506Q mutation for the factor V (factor V Leiden) and heterozygosis MTHFR C677T mutation (hyperhomocysteinemia). The aortic thrombosis has been spontaneously lysed and disappeared within 10 months. At 4 years, his physical examination is normal.

Conclusions Till now, there are no clear established guidelines concerning the management of arterial thrombosis. We insist that the blood clotting screen must be systematic and complete to look for association of congenital prothrombotic conditions which would increase the thrombotic risk.

P634 HOSPITAL MORTALITY OF FULL-TERM NEWBORNS: FACTORS AND CAUSES

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Introduction Full-term newborns mortality's is a public health issue because of its unexpected impact either on the infant's family and the medical staff, as opposed to the preterm death. Therefore, we aim to determine factors and causes associated with hospital mortality of full-term newborns.