

Consanguinity and family history were positive in almost all of the cases. For means of diagnosis, referral was done for aminoacid profile. outcome of the cases varied from early neonatal death to normalcy through later childhood.

Conclusion and recommendations The high consanguinity rate in our country makes IEM not uncommon problem. Estimation the overall incidence of IEM in general and UCD in particular is needed. Further studies are needed to explain the higher incidence in Northern Gaza. Lack of metabolic specialist and metabolic laboratory necessitates referral of cases which has many problematic issues. We need to have metabolic specialist and genetist as well as our own metabolic and genetic lab in Gaza strip.

1039 DETERMINATION OF THE PERFUSION INDEX REFERENCE VALUES AND VARIATION IN CLINICALLY AND HEMODYNAMICALLY STABLE NEWBORNS DURING THE EARLY NEONATAL PERIOD

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Background and Aims The perfusion index (PI); is an easy, non-invasive technique for the assessment of peripheral perfusion. The aim of this study was to determine the peripheral PI reference values and PI variability of clinically and hemodynamically stable newborns during the first five days.

Method Pre- (right hand) and postductal (foot) PI values were recorded on the sixth hours, first, second, third and fifth day of 241 newborns life with the new generation pulse oximeter [MASIMO Rad 7 Oximeter, USA].

Results A total of 241 newborns (196 term, 45 preterm) were included in the study. The average gestation age of all newborns was 38.4±2.0 weeks and birth weight was 3204±566 grams. According to the analysis of repeated measurements of term and preterm groups within the first 5 days, PI values of right hand and foot did not vary. However, right hand PI values were significantly higher than foot PI values (p<0.001). During the first 3 days, both the right hand and foot PI median values of term newborns were significantly higher than preterm newborns (p<0.001) whereas on the fifth day, difference was disappeared (right hand; p=0.10, foot; p=0.45).

Conclusion The peripheral perfusion of stable newborns did not vary significantly during the first five days. It was considered, higher PI value of term newborns compared to preterm newborns, is the result of early adaptation in the microvascular blood flow. PI values obtained from stable newborns may be guiding for further studies planned on various diseases associated with impaired perfusion.

1040 EVALUATION OF THREE RESUSCITATION PROTOCOLS IN HYPOVOLEMIC SHOCK USING MICROCIRCULATION ANALYSIS IN AN ANIMAL MODEL

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Background and Aims Ideal treatment of hypovolemic shock is not well established yet. Comparison of different treatments usually focuses on global haemodynamics. Our aim was to study if microcirculation analysis shows differences between three different resuscitation treatments.

Methods After sedation, relaxation and mechanical ventilation, hypovolemic shock was induced with controlled bleed (30ml/kg) in 17 two-month-old piglets. After 30 minutes pigs randomly received

treatment with either normal saline (NS) 30 ml/kg, Albumin 5% plus Hypertonic 3% Saline (AHS) 15 ml/kg or Albumin 5% plus Hypertonic 3% Saline plus a bolus of Terlipressin 20 µg/kg (TAHS). Microcirculation was assessed following international consensus recommendations. Perfused vessel density (PVD), microvascular flow index (MFI) and heterogeneity index (HI) were determined at basal, post bleeding and after treatment.

Results After treatment PVD and MFI were higher in AHS and TAHS groups than NS group and HI values were lower, but differences between the three treatment groups were not statistically significant. Median values for PVD were 13.0±0.9 (NS); 14.0±1.8 (AHS) and 14.0±1.9 (TAHS) (p=0,539). MFI median values were 2.47±0.29 (NS); 2.75±0.23 (AHS) and 2.67±0.19 (TAHS) (p=0,204). HI median values were 0.43±0.23 (NS); 0.22±0.20 (AHS) and 0.32±0.21 (TAHS) (p=0,316).

Conclusions After treatment there were no significant differences between the three treatments in none of the three microcirculation parameters. There are no significant differences in microcirculation analysis between several treatments of hypovolemic shock.

1041 PERFUSION INDEX ASSESSMENT IN NEWBORNS WITH TACHYPNEA

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Background and Aim Tachypnea of newborn is a frequent respiratory problem which may be due to several causes. Perfusion index (PI) is a way of monitoring of peripheral perfusion noninvasively. The aim of this study was to compare PI of newborns with and without tachypnea within the 1st hour of life.

Methods Neonates born at gestational age >36 weeks with C/S were monitored with Masimo Set Radical 7 pulse-oximeter post-ductally. PI and oxygen saturation (SaO₂) values, respiratory rates (RR), temperature and heart rate were manually recorded every ten seconds during first 3 minutes after the newborn was taken to the transition area (baseline) and at the 60 minutes of life.

Results Study included 30 tachypneic neonates 7 of which were admitted for transient tachypnea of newborn (TTNB) and 24 neonates with normal respiratory rates (controls). Birth weight of 30 tachypneic newborns were higher than controls p<0.01 whereas GA were similar. None of the neonates had risk for sepsis and all had capillary refill time < 3 sec. PI values were similar between groups both at baseline and at 1 hour (median and range; controls: 1.52(0.68–3.05), tachypnea:1.38 (0.68–3.07), TTNB: 1.2 (1.02–1.60) at baseline and controls: 1.23 (0.66–2.84), tachypnea: 1.42 (0.65–3.40), TTNB: 1.22 (1.03–2.08) at 1 hour. Only RR values were significantly different between groups.

Conclusion Low PI may be associated with various pathological conditions. The results of this study suggests that if the newborn has only transient tachypnea the PI remains normal which might be helpful for the clinician to decide about management.

1042 INCREASED PLASMA AND URINE NITRIC OXIDE LEVEL IN INTRAUTERINE GROWTH RESTRICTED LATE PRETERM INFANTS

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Background and Aims Nitric oxide (NO) is a vasodilator produced from different groups of nitric oxide synthases and plays an important role in regulation of vascular tone and blood flow in different organs. The aim of this study is to determine the connection