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OFF LABEL USE OF POWER INJECTABLE DOUBLE LUMEN PICCS FOR APHERESIS AND HEMODIAFILTRATION IN NEONATES AND CHILDREN

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Background: Apheresis (AP) and hemodiafiltration (HDF) in critically ill pediatric patients often require a double lumen central catheter. New methodologies (ultrasound guided venipuncture) and new materials (power injectable polyurethanes) allow us the safe placement of high flow, low caliber double lumen catheters which have a good performance for AP and HDF.
Methods: We reviewed our experience with 5Fr double lumen power injectable central catheters (ProPICC, Medcomp) inserted in our pediatric intensive care unit during the last 20 months and utilized for AP or HDF.
Results: ProPICCs were inserted by ultrasound guidance in the brachio-cephalic vein (3 cases: 1, 6 and 11 year old) or in the femoral vein (1 case: 20 days old). All catheters were inserted without complications and tunneled to the infraclavicular area (if inserted in the brachio-cephalic) or to the thigh. The average dwell time of the devices was 54 ± 31 days. All PICCs were easily used for AP (one patient, 6 year old, graft vs host disease) or HDF (three patients, renal failure). There were no episodes of flow occlusion or of persistent difficulty in performing the procedures. The protocols of our institution consist in 4–6 ml/kg/min of blood flow rate and 10–20 ml/kg/h of infused fluid rate for HDF, and 1 ml/kg/min for AP. We reported no catheter-related bacteremia and no catheter-related thrombosis.
Conclusions: We suggest that double lumen power injectable PICCs can be used as multi-purpose central line, even for AP and HDF in neonates and in small children.

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UNPREDICTABLE COMBINATION OF METABOLIC AND FEEDING PATTERNS IN MALNOURISHED CRITICALLY ILL CHILDREN: THE MALNUTRITION ENERGY ASSESSMENT QUESTION

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Purpose: Measurement of resting energy expenditure (REE) by indirect calorimetry has long been the gold standard, but prediction energy expenditure (PEE) equations can serve as a simple alternative. Correct assessment of REE in malnourished critically ill children is important to achieve optimal nutritional status.
Methods: 44-paired measurements were performed in 32 well-nourished and 12 malnourished critically ill children. REE was obtained using 30-min indirect calorimetry by E-COVX. Estimated PEE and predicted basal metabolic rate (PBMR) were calculated using the ordinary Harris-Benedict, Schofield-HW (WHO), Seashore, Fleisch, Caldwell-Kennedy, Henrys, the PICU specialized White and Meyer's equations.
Results: All patients survived. The mean differences between the non-malnourished and malnourished groups of patients were non-significant for the REE (178 ± 119 kcal/day) and the White's (−80 ± 133 kcal/day) or Meyer's PEE (−171 ± 101 kcal/day). In the malnourished group REE differed from all PEE ($p < 0.04$) and energy intake ($p < 0.02$). In the non-malnourished group Schofield equation was shown to overestimate REE compared to the two PICU oriented PEE ($p < 0.0001$) whereas energy intake also differed from PEE ($p < 0.02$). Although energy intake in the malnourished group was higher ($p < 0.02$), REE was lower ($p < 0.002$), demonstrating a contrasting combination of hypo-metabolism (79.8 ± 24 vs. 89.4 ± 34) and over-feeding (145 ± 68 vs. 81.6 ± 32, $p < 0.006$).
Conclusion: Our data illustrates the wide variability and poor agreement between REE and PEE in malnourished children. The combination of hypo-metabolism and overfeeding among malnourished critically ill patients renders even the use of the most specialized PEE estimation highly erroneous.

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BREASTFEEDING MULTIPLES: WHAT ARE THE OPINIONS OF EXPECTANT MOTHERS?

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Background and aim: Breast milk is considered the optimal nutrition for all newborn infants. The thought of breastfeeding multiples fills most of the mother with apprehension but adequate quantity and quality of milk production has been documented even for high multiples. This study is conducted to determine the expecting mothers' opinions about breastfeeding their multiples to be born.
Method: Women pregnant with multiples who are in their 2nd or 3rd trimester were informed about the study and after their consent the filled in a questionnaire inquiring about breastfeeding. The study was conducted in Sakarya-Turkey in 2012 between May and November.
Results: The mean age of the pregnant women was 29.94 ± 5.2 (min 18, max 38) years and 77 (1 %; n = 27) of them were primary school graduates. 42.9 % (n = 15) of them had at least one elder child. 42.9 % (n = 15) of mother's had no notion of breast milk sufficiency for multiples. Nevertheless 94.3 % (n = 33) of the expectant women declared intention to breastfeeding their multiples and 5%. 7 (n = 2) claimed formula preference.
Conclusion: The women expecting multiple babies should be encouraged and be assured regarding the breast milk sufficiency for their babies.

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KNOWLEDGE OF MOTHERS HAVING MULTIPLE BABIES ABOUT BREAST MILK STORING AND LATER USE

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