Early Age and Haematology and Oncology

O-037 SHORT-TERM EFFECTS OF RED BLOOD CELL TRANFSUSION ON HEPCIDIN CONCENTRATION IN PRETERM INFANTS

[1]L Lorenz, [1]KM Müller, [1]CF Poets, [2]A Peter, [3]G Olbina, [3]M Westerman, [1]AR Franz. *[1]Department of Neonatology, University Children's Hospital Tübingen, Tübingen, Germany; [2]Department of Internal Medicine Division of Endocrinology Metabolism Pathobiochemistry and Clinical Chemistry, University of Tübingen, Tübingen, Germany; [3]The BioIron Company, Intrinsic LifeSciences, La Jolla, USA*

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Background and aims Hepcidin, which acts as a negative feedback regulator of iron homeostasis, may in future serve as a non-invasive iron status parameter to monitor iron supplementation in preterm infants. For this, coexisting influencing factors should be taken into account. Our objective was to evaluate in preterm infants whether red blood cell (RBC) transfusions have a short-term effect on hepcidin concentrations in serum ($Hep_{(S)}$) and urine ($Hep_{(U)}$).
Methods Prospective observational study including very preterm infants receiving RBC transfusions. The concentration of the mature, 25 amino-acid form of hepcidin was determined in serum und urine by enzyme-linked immunosorbent assay together with cellular indices before and after RBC transfusion.
Results The study was conducted between May 2009 and September 2010 at Tübingen University Hospital. 20 preterm infants born at a mean gestational age of 26.0 (interquartile range: 24.9–27.4) weeks and with a mean postnatal age of 30.8 (interquartile range 29.9–32.1) daysreceived 27 RBC transfusions. When measured shortly after transfusion (mean 10 h), hematocrit values increased from a median of 26.6% (SD 2.8) to 40.9% (SD 3.2; $p < 0.0001$); $Hep_{(S)}$ also increased (geometric mean: 44.3 ng/mL (95% confidence interval: 30.8–63.8) vs. 58.0 ng/mL (95% confidence interval: 35.7–94.3; $p < 0.05$) but $Hep_{(U)}$ remained unaffected.
Conclusion These data indicate a short-term effect of RBC transfusions on serum hepcidin concentrations in preterm infants. Further longer-term observational studies are needed to understand the dynamics of hepcidin regulation in preterm infants.

O-038 POLYUNSATURATED FATTY ACID COMPOSITION OF BREAST MILK FROM EASTERN CANADIAN MOTHERS OF PRETERM INFANTS

[1]M Héon, [1]C Goulet, [2]C Garofalo, [2]AM Nuyt, [2]E Levy. *[1]Faculté Des Sciences Infirmières, Université de Montréal, Montreal, Canada; [2]Research Centre, CHU Sainte-Justine, Montreal, Canada*

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Background and aim Polyunsaturated fatty acids (PUFAs) are essential for early human neurodevelopment. Since breast milk represents the main dietary source of PUFAs for preterm infants, its fatty acid composition is of particular interest. Breast milk fatty acid composition fluctuates from one woman to another, by duration of gestation and stage of lactation, and among countries.

As PUFA composition of breast milk from Western Canadian mothers of preterm infants has been previously described, the aim of this pilot study was to describe the compositional variations of PUFAs in breast milk of Eastern Canadian mothers of preterm infants over the first 6 weeks of lactation.

Methods Samples of breast milk were collected on the 7th, 21st, and 42nd day of lactation from 40 Eastern Canadian mothers who had given birth to preterm infants of gestational age less than 30 weeks. Lipids were extracted using the Folch method (Folch *et al*., 1957). Thereafter, the method of direct transesterification was performed (Lepage and Roy, 1986) and PUFAs were quantified by gas chromatography.
Results Throughout the study, fatty acids from the n-3 and n-6 families, linoleic acid (C18:2n-6), α-linolenic acid (C18:3n-3), and eicosapentaenoic acid (C20:5n-3) remained stable, whereas arachidonic acid (C20:4n-6) and docosahexaenoic acid (C22:6n-3) decreased significantly.
Conclusion Results on the compositional variations of PUFAs in breast milk over the first weeks of lactation are somewhat similar to results of previous European studies. However, values of PUFAs in preterm breast milk of Eastern Canadian mothers are lower than those of Western Canadian mothers.

O-039 WITHDRAWN

End of Life

O-040 END-OF-LIFE DECISION MAKING – PAEDIATRIC INTENSIVISTS' AND NONINTENSIVIST PAEDIATRICIANS' ATTITUDES

[1]S Grosek, [2]M Orazem, [3]M Kanic, [4]G Vidmar, [5]U Groselj. *[1]Pediatric Surgery and Intensive Therapy, University Medical Centre Ljubljana, Ljubljana, Slovenia; [2]Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia; [3]Department for Rhythmology, Heartcenter Leipzig, Leipzeg, Germany; [4]Department for Research, University Rehabilitation Institute of the Republic of Slovenia, Ljubljana, Slovenia; [5]Department of Paediatric Endocrinology Diabetes and Metabolic Diseases, University Children's Hospital University Medical Center Ljubljana, Ljubljana, Slovenia*

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Objective To describe the attitudes at the end-of-life decision (EOLD) making among Slovene paediatricians.
Design A cross-sectional survey using questionnaire and case scenario.
Setting Paediatric Health Care Institutions in Slovenia.
Participants Paediatric intensivists, specialists and residents in paediatrics.
Interventions None.
Main outcome measures Differences between attitudes regarding EOLD.
Results 323 participants of registered paediatricians in Slovenia 586 (55.1%) were included. The response rate was 46.7% (151 of 323 paediatricians) or 25.8% (151 of 586 of registered paediatricians). The decision to limit life-sustaining treatment at (LST) the end-of-life was ethically acceptable among Slovene paediatricians. The highest consent was found among residents 90.2%, followed by 83.3% of intensivists and 73.8% of specialists. Ethical differences between withholding and withdrawing were found in all three groups found, though intensivists agreed on this issue the least, in only 25.1%, while specialists and residents consented almost evenly, 40.0% and 40.7%, respectively. Answers on attitudes of EOLD did not show any statistical differences. 28.3% of specialists would follow do-not resuscitate order in comparison to 59.1% and 64.2% of intensivists and residents. The majority of participants answered that religious and cultural beliefs of paediatricians should not be considered in