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were analyzed. Based on the admission' year, two groups were formed: group A (1995-2002) and group B (2003-2011), where the variables previously mentioned were compared. Statistic analysis was carried out with SPSS<sup>a</sup> 19.0.

**Results:** the mean annual incidence was 2.2 per 10.000 live-newborn. Of the 62 newborns admitted to PICU, 30 (48.4%) were prenatally diagnosed, 24 (38.7%) had associated malformations and 14 (22.6%) had a right-sided defect. Forty five (73%) were born in a perinatal tertiary referral centre. The global mortality was 14.5%. The mortality in group A (24%; n = 29) was significantly higher than in group B (6%; n = 33; p = 0.048). Prenatal diagnosis was made in 34% in the group A and 61% in the group B cases (p = 0.04). Endotraqueal entubation was performed in 55% of the group A vs 87% of the group B cases (p = 0.02). Regarding prognostic factors and underlying therapeutic strategies, no statistically significant differences were observed between the two study groups.

**Conclusions:** the incidence of CDH in Portugal's central region is similar to what is described in the medical literature. A significant decrease in mortality was observed throughout the study time, and that can be partially explained by prenatal diagnosis, which led to an in perinatal care.

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#### PO136: The Ceruloplasmine Value as Anti-Oxidative Defense Marker in Neonatal Asphyxia

Melinda MÁTYÁS, Gabriela ZAHARIE, Ligia BLAGA, Monica HASMASANU, Adriana MURESAN

**Aim:** The ceruloplasmine (CP) is a metal binding protein with important role in the antioxidative defense. The aim of the study was to determine the ceruloplasmine value at term and preterm newborns with perinatal asphyxia.

Material and Methods: We conducted a prospective non-randomized study between January 2003 and June 2006. The study group was represented by fourty eight newborns, 11 term and 37 preterm newborns. They had different severity of asphyxia. The control was represented by 20 healthy term newborns. For each newborn in the study group we determined the CP in the first and third days, while only on day one of life for the control group. Ravin's spectrofotometric method was used to determine the CP value. We used venous blood sample. The statistical analysis was done using the Statistical program Ex- SPSS.

**Results:** The median values of CP were 24.26mg/dl at term newborns with ashyxia and 25.93mg/dl at preterms from the study group. There were no significant difference at correlation matrix between the two values. The CP values were significantly lower on day one of life then on day three at preterm newborns with asphyxia newborns (p = 0.03). In the study group CP was significantly higher at the term newborns then at preterms of the same group (p = 0.031). A significant difference was found at matrix corelation between the CP value of preterms on day three and the CP value of the control group (p = 0.01). There were no significant correlation between CP values at term newborns with asphyxia and CP values of term healthy newborns from the control group.

**Conclusions:** The CP value as marker of antioxidant defense is significantly lower at preterm newborns with asphyxia then on term newborns with the same pathology. The value of this marker is influenced by the gestational age and by association of the asphyxia.

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# PO137: Acquired CMV Infection in the Neonatal Intensive Care Unit

A MASCARENHAS, P RODRIGUES, J BRISSOS, A CASI-MIRO, MJ LAGE, MT NETO, M SERELHA

**Introduction:** (CMV) infected mothers may have viral reactivation during lactogenesis and excrete CMV in the milk. Breastfed preterm infants, without enough serum titers of antibodies, are more likely to have a symptomatic infection. In this infants, postnatal infection is difficult to diagnose because other pathologies related to prematurity may have similar signs and symptoms. Four cases of postnatal CMV infection are reported.

Clinical Cases: The median gestational age and birth weight were respectively 27 weeks (23w-34w) and 715g (580g-2500g). All infants were out born and transferred for surgical treatment; three newborn infants had been fed with human milk; all had received leukodepleted red cells. The median postnatal age at the beginning of the disease was 36 days (25d-40d). Three patients had throm-bocytopenia, 2 anemia, 1 neutropenia, 3 hepatosplenomegaly, 3 hepatitis, 1 pneumonia, 1 sepsis and 1 atrioventricular block. Three patients had negative PCR for CMV in the Guthrie card. The other one had negative IgG and IgM at the beginning of the disease. Two mothers had positive IgG antibodies. The CMV DNA was detected in the breast milk of just one mother. The newborn with sepsis and pneumonia needed treatment with ganciclovir and immunoglobulin. At present, no CMV related complications were found. One infant had a non-related CMV infection death.

**Discussion:** Postnatal CMV infection may have a severe clinical course in preterm and very low birth weight infants. Mother's milk is likely to be the main source of infection so measures to inactivate the virus in the milk, should be considered.

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# PO138 Pain Management in Neonatal Intensive Care Unit: Translating Research and Evidence Into Practice

Maria Dulce DAMAS CRUZ, Ananda Maria FERNANDES, Catarina RESENDE OLIVEIRA

Introduction: There is a consensus that a revolution in knowledge of neonate pain management has occurred, an increasing volume of scientific evidence to support the assessment and clinical guidelines. There are also different studies that indicate a gap between what is known and what occurs in practice. The goal of this study was known the models that contribute for applicability of the Evidence-Based Practice and explored the link between the evidence and the neonatal pain management.

**Methods**: A literature review including studies about factors influencing use of research in practice and presentation of models for the integration of evidence-based practice.

Results: Individual determinants, educational programs, promoting network and dissemination of evidence-based practice findings are important to increase professional care involvement. While we have growing evidence base, knowledge does not appear to be efficiently translated into practice, one reason may be that the implementation of evidence into practice is not from researcher to practitioner. Practice defined by regulatory, accreditation agencies, and professional standards if regulated by audits have more efficacy. Strategies involving interaction between healthcare professionals are consistent. Social learning theory contributes to theoretical understanding of pain, but also provides insight into the mechanisms of effective treatment. The positive organizational factors

and innovation are determinant for research use. A comprehensive knowledge base and familiarity with advanced research related to pain management are paramount, to help the clinician and nurses who care neonates in the neonatal intensive care units.

**Conclusion**: Effective knowledge translation strategies are required to advance the field and improve clinical outcomes. The role of the context is a potent mediator of the implementation of evidence into practice. There is a clear evidence of inter-correlations among factors that may influence research utilization. Organizational context is a central influence on the effective use of clinically relevant evidence by healthcare professionals in neonatal pain management.

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#### PO139: A Case of Fetal Hydrops

Tsz Kin LO, WL LAU, WC LEUNG, YY LAM, E LAU, MHY TANG

**Introduction:** Over the years, we have been using parental mean red cell volume (MCV) cut-off of 80fL for antenatal screening of thalassemia in our locality. In our experience, it is reliable and effective.

Clinical case: This was an unplanned pregnancy of a 29-year-old healthy mother. She attended regular antenatal visits since 12-weeks pregnancy. Routine prenatal thalassemia screening showed her MCV was low (65.3fL); husband's MCV normal (96fL). Thus, the fetus was not at risk to have thalassemia major. Ultrasound exam at 16 and 33 weeks were normal. She was admitted to our unit at 34 weeks for decreased fetal movement. Ultrasound examination showed fetal hydrops with severe anemia (middle cerebral artery peak systolic velocity > 1.5MoM). Emergency caesarean section was performed. Baby's hemoglobin was only 5.5g/dL. Despite resuscitation, baby was in critical condition. Hemoglobin pattern revealed this was a case of alpha thalassemia major. Other workups for fetal hydrops & fetal anemia were negative. Life support was withdrawn subsequently on the couple's request and the baby succumbed. The mother denied any other sexual partners even when interviewed in her husband's absence. DNA study confirmed that the baby was homozygous for alpha thalassemia major. The mother had hemoglobin H disease and her husband normal alpha genes. Non-paternity was disclosed by short-tandem repeat (STR) analysis. The result was disclosed to the mother alone. Recurrence risk being nil with her husband and 25% with the affected baby's biological father was explained to her.

**Discussion:** This case reminds us of the possibility of non-paternity in perinatal medicine, and therefore, the need for perinatologists to have an open mind. Significant ethical issues are involved. Number one, the condition does not endanger the husband, it follows that disclosure to him becomes voluntary at the woman's discretion. Number two, there is a question on the need to have husband's prior consent before paternity testing, and on his right to know about the results as his blood was involved in the test. Lastly, the right of parents to decide on withdrawal of life support for a critically-ill neonate has to be understood in in its social, cultural and moral context.

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#### PO140: Neonatal Palliative Care: Health Care

#### **Professional's Experience**

Margarida DE CARVALHO, Ernestina SILVA

Introduction: Although anticipating death in newborns is a challenge in our society and culture, this is a fundamental demand. Being a subject little discussed, we believe we can bring something new to its reflection, having outlined the following goals: to recognize the care that the health professionals believe to be essential, to describe the feelings and hardships experienced in this context, to reflect about the most significant ethical aspects and to identify those more relevant to the improvement of palliative neonatal care. **Methods:** We developed an exploratory-descriptive study of qualitative nature in an intentional sample of 20 health care professionals, of a neonatal unit of the centre region of the country. The analysis of the questionnaires was accomplished using content analysis according to Bardin (1977, 2009) and Amado (2000).

**Results:** We found difficulties in the relationship, communication and ethical issues experienced by the health care team in a context of interdisciplinary dialog deficit and in the absence of consensus/ protocols. Negative feelings/emotions have emerged, implying the discomfort and the unpreparedness with which the heath team debates in this neonatal unit.

**Conclusion:** It was highlighted the appraisal of the importance of the care provided to the newborns and their families, contributing to the recognition of palliative neonatal care in our country. However we invoke the necessity to progress in a more effective way in this area of the care.

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## PO141: Método Canguru: Uma Prática de Excelência

Madalena RAMOS, L. SILVA, C. CASTRO

Introdução: 'Método Canguru' é uma prática de excelência, que se traduz em inúmeros benefícios para o bebé/mãe, pai... a família, e uma das áreas de intervenção, privilegiadas pelo programa NIDCAP. No serviço de Neonatologia, do Centro Hospitalar São João, foram dados os primeiros passos nos anos 90, tornando-se prática corrente, a partir de 2005.Por definição, é uma forma de contato, pele com pele, entre a mãe/pai e o bebé prematuro (ou não: pode ser para qualquer bebé). O bebé é colocado, na posição vertical, só com uma fralda e um gorro, no peito da mãe/pai e aí permanece em contacto direto com a pele do progenitor, pelo tempo que ambos entenderem ser agradável e suficiente.

**Métodos:** Este trabalho pretende analisar as implicações desta prática, nos cuidados prestados ao recém-nascido internado na UCIN, através de um questionário aos pais e aos profissionais.

**Resultados:** Da análise dos resultados pretende-se perceber de que forma esta prática influência a qualidade dos cuidados prestados e o grau de importância que lhe é atribuída por cada um dos grupos estudados.

**Conclusão:** O Método Canguru – Uma prática de excelência... serviço de Neonatologia, advoga uma filosofia de cuidados centrados no desenvolvimento e na família e o Método canguru, é uma das intervenções que complementa e reforça este conceito. Espera-se que os resultados do estudo sustentem esta linha de orientação.

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