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OUTCOME AFTER NEONATAL HYPERBILIRUBINEMIA : A SYSTEMATIC REVIEW

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Background/aim: Kernicterus is the most feared and the best described complication of untreated neonatal hyperbilirubinemia (NH). More common complications and their impact on neurodevelopmental outcome/ impairment (NDO/I) remain unclear. We performed a systematic review of the literature since 2001 on kernicterus, hearing and visual outcome, NDO/I and secondarily on nevi development, phototherapy induced DNA-changes and other controversial outcomes.

Method: A standardized, systematic search was performed (Medline, Embase and Cochrane database). After screening titles and abstracts, full articles were assessed and eligible ones were included and graded according their level of evidence.

Results: From 557 hits, 39 studies were included. The following outcomes were included (the number corresponds to the number of articles addressing each outcome): 5 kernicterus, 6 hearing impairment, 6 visual outcome, 2 retinopathy of prematurity (ROP), 18 NDO/I, 2 nevi, 4 autism and 1 each for asthma, cerebral MRI changes and attention deficit syndromes (ADS). Besides the development of kernicterus we found a clear correlation between NH and NDO/I as well as a significantly lowered IQ in the presence of a positive coombs test. No correlation between NH and visual impairment or ROP was seen, whereas hearing impairment, nevi development, phototherapy induced DNA changes or later apparent ADS and asthma remain controversial.

Conclusion: NDO/I and kernicterus are the most commonly reported complications of NH. The impact of NH on more frequent and less severely disabling outcomes like hearing or visual impairment remains unclear. New controversies on the possible association between NH and asthma, ADS or autism arise.

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THE PERINATAL MORTALITY IN LETO' MATERNITY HOSPITAL NICU DURING 2007-2009, AND SURVIVAL OF NEWBORN INFANTS WITH BW ≤ 1500 GRAMS

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Background and aims: Recording the survival of newborns in any Maternity Hospital is of utmost importance, as it contributes to the understanding of the level of perinatal care in Greece.

The aim is to present evidence about perinatal mortality and survival rate of very low birth weight (VLBW) neonates (birth weight (BW) ≤ 1,500 grams) at the NICU at Leto Maternity Hospital.

Methods: Neonates transferred to other hospitals, admissions in Leto's NICU, perinatal mortality and neonatal survival (BW ≤ 1,500 grams), were recorded and documented during 2007 to 2009.

Results: In 2007, 744 neonates admitted in the NICU, 37 with BW ≤ 1,500 grams (11 with BW=500-1,000 grams and 26 with BW=1,001-1,500 grams). Five were transferred to other hospitals (three for financial reasons and two needed surgical operation treatment). In 2008, 908 neonates admitted in the NICU, 40 with BW ≤ 1,500 grams (17 with BW=500-1,000 grams and 23 with BW=1,001-1,500 grams). Six were transferred to other hospitals (three needed intestinal surgery treatment, and three with posthemorrhagic hydrocephalus). In 2009, 911 newborns admitted in the NICU, 45 with BW ≤ 1,500 grams (15 with BW=500-1,000 grams and 30 with BW=1,001-1,500 grams). Four were transferred to other hospitals (two for financial reasons and two with posthemorrhagic hydrocephalus). 11 early fetal deaths were recorded (3, 3, and 5 for each year respectively) but no late neonatal fatalities (Table 1).