YOUNG INVESTIGATOR AWARD PAPERS

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HYPOTHYROXINAEMIA IN PRETERM INFANTS IN SPECIAL CARE NURSERY (SCN), UNIVERSITY MALAYA MEDICAL CENTRE (UMMC)

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Objective: To determine the incidence of transient hypothyroxinaemia and persistent hypothyroxinaemia (true congenital hypothyroidism) and factors affecting transient hypothyroxinaemia in preterm infants up to 28 days of life.

Methods: This was a prospective longitudinal study from 1st January 2010 to 30th June 2010 of preterm infants born at 25 to 36 weeks of gestation. Blood samples for FT4 and TSH were collected and sent at birth, days 7, 14 and 28 of life. Data were collected using a standard data collection form. SPSS programme was used to analyse the data.

Results: The incidence of transient hypothyroxinaemia was 59.3% and the persistent hypothyroxinaemia was 2.4%. There was one patient with persistent hypothyroxinaemia with high TSH with borderline normal FT4 beyond 28 days of life. This might indicate true congenital hypothyroxinaemia and L-thyroxine treatment was commenced. The incidence of transient hypothyroxinaemia was significantly affected by the presence of patent ductus arteriosus (PDA) (p<0.01), oxygen dependency up to 28 days (p<0.02), clinical sepsis (p<0.02) and those who were exposed to at least 2 occasions of povidine-iodine compound (p<0.001).

Conclusion: The incidence of transient hypothyroxinaemia was high (59.3%) and the persistent hypothyroxinaemia was 2.4%. Transient hypothyroxinaemia was significantly associated with PDA, clinical sepsis, oxygen dependency up to 28 days of life and those who were exposed to more than 2 occasions of povidine-iodine compound. It is recommended to monitor thyroid functions in preterm infants < 36 weeks of gestation receiving intensive care up 4 to 8 weeks of age to avoid missing cases of true congenital hypothyroidism.