To Determine the Incidence of Congenital Hypothyroidism in Jaffna MOH Area

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The aim of the study is to determine the incidence of congenital hypothyroidism (CH), newborns born in Teaching Hospital and other private hospitals in Jaffna Medical Officer of Health (MOH). The study was undertaken in Jaffna MOH division. A systematic sampling technique was used to identify a sample that represents the population of newborns delivered in Jaffna MOH in 2012. Ethical clearance was obtained from ethical review committee, Faculty of Medicine, University of Jaffna, Jaffna, Sri Lanka. Written consents of the mothers of newborns were obtained to participate in this CH screening program. A total of 200 infants were screened during the study period (from 1st of June to December 31st 2012) in which 109 were females and 91 were males. Before mothers were discharged from the hospital, blood spots were taken from newborns by heel-prick and collected on a special filter paper (Schleicher and Schuell No 903). Air dried blood spots were stored and processed for thyroid stimulating hormone (TSH) measurement by radioimmunoassay. Neonates with blood spot TSH concentration of 20 mU/L or above in the whole blood after 72 hours of birth considered at risk for CH and were recalled for serum confirmation. The cut-off value for TSH in the blood spots collected prior to 72 hours of life was at 40 mU/L. Mean blood spot TSH value was 15.70 mU/L (95% CI; 11.55-19.85). Only one true positive case of hypothyroidism (very high TSH value- 360.9 mU/L) was identified among them. Newborn was recalled for serum TSH estimation and confirmed to have CH and referred to paediatrician for management of CH. Based on this study, the incidence of true CH was 1:200.

Keywords: Newborn, Congenital hypothyroidism, Abnormal, Neonatal, Radioimmunoassay, Thyroid stimulating hormone