

# Hubungan antara kadar thyroid stimulating hormone neonatus dan status prematuritas = Neonatal thyroid stimulating hormone level and its association with prematurity status / Ujang Khoerur Rizqi

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## Abstrak

### <b>ABSTRAK</b><br>

Latar Belakang: Hipotiroid kongenital merupakan salah satu penyebab paling umum terjadinya retardasi mental. Padahal, terjadinya komplikasi hipotiroid kongenital dapat dicegah sejak dini. Oleh karena itu, skrining hipotiroid kongenital dengan mengukur kadar TSH menjadi penting terutama pada bayi yang berisiko lebih tinggi terkena hipotiroid kongenital. Usia prematur diduga menjadi salah satu faktor risiko hipotiroid kongenital karena terkait imaturitas organ. Tujuan: Penelitian ini dilakukan dengan tujuan mengetahui persentase bayi prematur, nilai rujukan TSH neonatus di Indonesia, dan hubungan antara kadar TSH neonatus dan status prematuritas. Metode: Desain penelitian yang digunakan adalah studi potong lintang dengan subjek berasal dari data skrining hipotiroid kongenital RSUPN Dr. Cipto Mangunkusumo yang sampel darahnya dianalisis dengan cara Fluorometri dengan reagen Labsystem. Data berasal dari bulan Mei dan Juni 2017 yang diperoleh melalui teknik consecutive sampling. Dari 2987 subjek, terdapat 1700 subjek yang memenuhi kriteria inklusi dan eksklusi. Subjek dibagi menjadi kelompok bayi prematur n=111 dan bayi lahir cukup bulan n=1589. Sampel kemudian dianalisis menggunakan SPSS versi 20.0 untuk mengetahui hubungan kadar TSH dan status prematuritas dengan uji Mann-Whitney dan uji korelasi, serta MedCalc versi 17.9 untuk mencari nilai rujukan TSH neonatus di Indonesia. Hasil: Persentase bayi prematur yang didapatkan yaitu sebesar 6,5. Nilai rujukan TSH neonatus berdasarkan kelahiran prematur didapatkan nilai 1,0-8,9 mU/L dengan median 2,5 1,0-12,8 mU/L dan berdasarkan kelahiran cukup bulan sebesar 1,5-8,0 mU/L dengan median 3,2 1,0-19,8 mU/L. Analisis menggunakan uji Mann-Whitney, didapatkan hubungan bermakna antara kadar TSH neonatus dan status prematuritas p.

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### <b>ABSTRACT</b><br>

Background Congenital hypothyroid is one of the most common causes of mental retardation. Actually, this complication can be prevented since earlier. Therefore, congenital hypothyroid screening by measuring TSH level is important to every infants, especially in higher risk of developing congenital hypothyroid.

Prematurity is hypothesised as one of risk factor for congenital hypothyroid related to organ

immaturity. Objective The aim of this study is to determine the percentage of preterm birth, neonatal TSH reference values in Indonesia, and association between neonatal TSH level with prematurity status. Methods This cross sectional study used subjects which was obtained from congenital hypothyroid screening data in General National Hospital Dr. Cipto Mangunkusumo from May to June 2017 by consecutive sampling. The screening of congenital hypothyroid used Fluorometry with Labsystem reagen to analyse blood samples.

From 2987 subjects, 1700 subjects fulfilled the inclusion and exclusion criteria. Subjects were divided into two groups preterm infants n 111 and term infants n 1589. Then, samples were analysed with SPSS version 20.0 to investigate association between neonatal TSH level with prematurity status by Mann Whitney test and correlation test, also MedCalc version 17.9 to calculate neonatal TSH reference values. Results The

percentage of preterm infants was 6.5 . Neonatal TSH reference values based on preterm birth infants were 1.0 8.9 mU L with median 2.5 1.0 12.8 mU L and based on term infants were 1.5 8.0 mU L with median 3.2 1.0 19.8 mU L. There was also a significant association between neonatal TSH level and prematurity status Mann Whitney test, p