

UNIVERSITI TEKNOLOGI MARA



**PREVALENCE OF CONGENITAL
HYPOTHYROIDISM SCREENING IN HOSPITAL
SEBERANG JAYA, PULAU PINANG**

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DECLARATION

I hereby declare that this thesis is based on my original work. I also declare that this thesis has not previously or concurrently submitted by any other student at UiTM or other institutions.

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ABSTRACT

PREVALENCE OF CONGENITAL HYPOTHYROIDISM SCREENING IN HOSPITAL SEBERANG JAYA, PULAU PINANG

Congenital hypothyroidism is a disease that suffers newborn cause of thyroid function abnormalities. Thyroid is function to produce hormone and send to all cell in the body for growth. Pituitary gland release TSH after receive signal from hypothalamus. Then, TSH sends to thyroid gland to produce T3 and T4 hormone. This disease occurs when the TSH is higher than normal range and thyroid gland is released insufficient T4 hormone. It is an uncommon and treatable disease. This study is to investigate the prevalence of congenital hypothyroidism screening. The screening gives information the presence or absence of CH on newborn. Cord blood will be collected into lithium heparin tube and will perform TSH and T4 test for screening. The normal range for TSH is $21 \mu\text{ml/L}$ while T4 is $15 \mu\text{ml/L}$. If TSH elevated and T4 is low from normal range it will called hypothyroidism while TSH low and T4 elevated from normal range called hyperthyroidism. The presences of CH need to treat earlier because it can cause mental retardation to infants. If 400 newborns diagnosed this screening, it can be estimate 3 infants diagnosed CH in 0.75% whereas the remainder the infants diagnosed normal from CH which 99.25%. This shows that the prevalence of CH screening is high but diagnose for CH is low. This treatable disease can be manages with a good care to the infants. After detect CH on the newborn, the recommended treatment will be given to the infant.

Key words : Congenital hypothyroidism, normal ranges, TSH, T4, mental retardation, uncommon and treatable disease

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