The Accuracy of Risanto's Estimated Fetal Weight (EFW) Formula in Determining Birth Weight

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ABSTRACT

Objective: To determine the accuracy of Risanto's formula in estimating fetal birth weight based on symphysis-fundal height. **Method:** This is a cross sectional study conducted in Dr. Sardjito Hospital and 6 affiliated hospitals in Central Java, Indonesia. All pregnant mothers meeting the eligibility criteria were included in the study. Fetal weight estimation was calculated using Risanto's formula, i.e. infant birth weight (grams) = 125 x symphysis fundal height (cm). Birth weights were measured using the same baby scales after calibration. The difference between Risanto's EFW and birth weight was then calculated. Statistical analysis was performed using paired T-test. **Results:** A total of 944 pregnant mothers participated in the study. The average birth weight was 3048.01 grams ± 390.60 and the average Risanto's EFW is 2961.63 grams ± 395.05, with the mean difference 86.37 grams. Further analysis showed that 78.1% of the actual birth weight laid between ± 10% of the estimated fetal weight; while 94.8% laid between ± 15%; and 99.7% laid between ± 20%. **Conclusion:** Risanto's EFW is accurate in predicting fetal birth weight.

Southeast Asian Ovalocytosis in Pregnancy: An Interim Analysis on Prevalence of Disease

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ABSTRACT

Introduction: Southeast Asian Ovalocytosis (SAO) is a haemoglobinopathy involving abnormalities in the red cell membrane, resulting in the appearance of ovalocytes rather than the typical biconvex appearance. Also known as hereditary ovalocytosis of Melanesians and stomatocytic elliptocytosis, this condition is believed to be protective against *Plasmodium* infection and inherited in an autosomal dominant fashion. While heterozygotes are largely asymptomatic beyond the neonatal period, homozygous SAO results in fetal anemia, hydrops and are fatal in utero. We sought to clarify the prevalence of this disease in our population. **Methodology:** This was an interim analysis involving 106 patients who were screened with peripheral blood films in pregnancy. Recruitment took place in 10 randomly selected antenatal clinics in Sarawak. Venous blood was drawn, placed in an EDTA tube and fixation on a standard slide with Leishmann staining performed within 2 hours of sampling. The slides were read by a designated pathologist in a central laboratory. **Results:** 104 samples were available for analysis as 2 of the samples were uninterpretable due to the presence of artifacts. The prevalence of SAO was 8.65%, predominantly found in indigenous races (Iban & Bidayuh) and Malays. Although the sample size was not powered to discern the prevalence amongst specific races, none of the patients of Chinese descent were reported as positive for SAO. There was no significant difference in the mean haemoglobin levels (11.38 g/dl±1.05 vs 11.62 g/dl ±1.35; p=0.58) or mean corpuscular haemoglobin (29.5±2.8 vs 27.9±3.03; p=0.13) between patients with SAO and controls. **Conclusion:** The prevalence of SAO is significant compared to similar conditions which also result in fetal anemia such as thalassemia. Consideration should be made for targeted prenatal screening and counselling. Screening would not be possible from a full blood count per se.