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# English Summary

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## **CORRELATION BETWEEN SERUM FERRITIN IN THIRD TRIMESTER PREGNANCY WITH BIRTH WEIGHT**

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**Background :** Iron deposit can be measured by ferritin serum level. Until now, study on the correlation between iron deficiency anemia and iron status in third trimester pregnancy, is still very limited.

**Objective:** To examine iron status in third trimester pregnant women who later delivered low birth weight babies; correlation between social economic status with ferritin serum level in third trimester pregnancy and the correlation between iron supplementation with ferritin serum level of pregnant women.

**Design:** Cross Sectional Analytical Study

**Setting:** Hemoglobin level was measured with cyanmethemoglobin method and ferritin serum was measured by immunochemiluminescence (ICMA) method using IMMULITE 2000 (at Prodia laboratory)

**Participants:** 30 pregnant women who later delivered low birth weight babies below 2500 grams.

**Outcome measures:** Hemoglobin and ferritin serum level.

**Results:** Hemoglobin level of low birth weight babies in this study was 17,137 (SB 2,083) g/dl with ferritin serum level about 338,30 (SB 271,58) ng/ml. Correlation coefficient was 0,538 with significant value 0,002 ( $p < 0,01$ ). Using cross sectional analysis, ferritin serum level of pregnant women was very significantly

correlated with ferritin serum level of low birth weight babies ( $p < 0,01$ ); Social economic status significantly correlated with ferritin serum level of pregnant women ( $p < 0,05$ ); Iron supplementation very significantly correlated with ferritin serum level of pregnant women ( $p < 0,01$ ).

**Conclusion :** There is a significant correlation between ferritin serum level in third trimester pregnancy and ferritin serum level in their low birth weight babies; between social economic status of pregnant women and their babies' birth weight, and between iron supplementation and ferritin serum level among pregnant women.

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## **URIC ACID LEVEL AS A PREDICTOR FOR PRETERM SEVERE PREECLAMPSIA MANAGEMENT**

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**Introduction :** Preeclampsia/eclampsia is still the main cause of maternal and perinatal mortality; but the choice between conservative and active management for severe preeclampsia in preterm pregnancy is still unsettled. On the other hand, serum uric acid (SUA) level can be used as a predictor for preeclampsia in later pregnancy and for maternal and perinatal outcome in preeclampsia cases. High SUA may worsen maternal and perinatal outcome.

**Objective :** To determine the cut-off point of SUA for use in choosing either conservative or active treatment in the management of severe preeclampsia in preterm pregnancy.

**Method :** Observational study on severe preeclampsia cases in preterm pregnancy (21-36 weeks) managed conservatively in Department of Obstetrics and Gynecology Sanglah Hospital Denpasar. SUA level was obtained from each sample. Conservative treatment was considered failed if pregnancy was terminated or in case of IUD before 37 weeks of pregnancy.

**Results :** Among 65 samples the mean level of SUA was 7,749 mg/dL (SD 1,31). On conservative treatment, 44 cases (67,7%) failed. Using sensitivity, specificity value and ROC curve, the cut-off point of SUA was determined at 7,60 mg/dL. Among 41 cases with  $SUA \geq 7,60$  mg/dL, 38 cases (92,7%) failed; and from 24 cases with  $SUA < 7,60$  mg/dL, 6 cases (25,0%) failed - sensitivity 86,36% ; specificity 85,71% ; positive predictive value 92,68% and negative predictive value 75% (PR : 3,71 ; CI 95% : 1,844 – 7,453 ;  $\chi^2$  : 31,710 ;  $p$  : 0,001).

Among 41 cases with  $SUA \geq 7,60$  mg/dL there were 7 cases (17,1%) with birth weight (BW)  $< 1500$  g., 24 cases (58,5%) with  $BW \geq 1500 - 2499$  g. and 10 cases (24,4%) with  $BW \geq 2500$  g. And from 24 cases with  $SUA < 7,60$  mg/dL there were 2 cases (8,3%) with  $BW < 1500$  g., 7 cases (29,2%) with  $BW \geq 1500 - 2499$  g. and 15 cases (62,5%) with  $BW \geq 2500$  g. The difference was significant ( $\chi^2$  : 9,290 ;  $p$  : 0,010).

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