**OP17.10 - Prediction of a successful vaginal delivery using serial trans-perineal ultrasound**

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**Introduction**

Labor progress evaluation using digital examination has high inter-observer variability. Intrapartum transperineal ultrasound is an objective and easy to use method. We aim to determine the accuracy of transperineal ultrasound to predict the success of vaginal delivery.

**Methods**

This study was conducted from March to May 2017 at delivery room of Persahabatan General Hospital-Jakarta, Hermina Mekarsari, and Mary Cileungsi Hospital, Indonesia. AoP and HPD were measured before and during the active phase of labor. The cut-off value for AoP and HPD were determined using Receiving Operating Curve (ROC) analysis. In addition, the rate of progression of AoP and HPD were calculated to predict the success of vaginal delivery.

**Results**

There were 91 women eligible for analysis. The VD rate was 84.6% (79/91). Before onset of active phase, sensitivity (Se) and specificity (Sp) of AoP ≥94.5° were respectively 94% and 75% (AUC 0.87), while Se and Sp of HPD <48.5 mm were respectively 75% and 92% (AUC 0.93).

During active of labor, Se and Sp of AoP ≥105° were respectively 89% and 75% (AUC 0.88), while Se and Sp of HPD <43.5 mm were respectively 75% and 100% (AUC 0.95). The median rate of progression for both of AoP (3.75 °/hour in VD group VS 1 °/hour in CS group) and HPD (1.75 mm/hour for VD group versus 0.81 mm/hour in CS group) were associated with the success of vaginal delivery (p<0.001).

**Conclusion**

AoP and HPD measurement using intrapartum trans-perineal ultrasound have good accuracy to predict the success of vaginal delivery. The rate of progression of both AoP and HPD are correlated with the success of vaginal delivery.