Assessment of fetal occiput position during the 2nd stage of labor: how reliable is the transperineal approach?

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Objective
To compare the accuracy of transperineal (TP) ultrasound with transabdominal (TA) approach in the sonographic assessment of fetal occiput position during the second stage of labour.

Methods
A series of low-risk women at term attending the labour ward of an Obstetrics and gynecology unit, Mongi Slim Hospital were prospectively recruited for the purpose of this study. During the second stage of labour patients were evaluated first by TP and then by TA ultrasound to determine the fetal position. The occiput position was labelled as DOA (direct occiput anterior), ROA (right occiput anterior), LOA (left occiput anterior), DOP (direct occiput posterior), ROP (right occiput posterior), LOP (left occiput posterior), ROT (right occuput transverse) and LOT (left occiput transverse). The agreement between the two techniques was assessed.

Results
Overall 32 patients were recruited in the study group. The mean maternal age was 29±4.8 years and the mean BMI was 27.1±2.88. Ultrasound examination was performed at 13±5 minutes from the beginning of the active pushing. The ultrasound findings of the fetal occiput position were recorded. In all cases TA ultrasound confirmed the fetal occiput position as determined at TP approach except in one case of DOA that had been recorded as LOA using TP ultrasound. Picture A: Transabdominal ultrasound image depicting a left occiput posterior position Picture B: Transperineal ultrasound image depicting a left occiput posterior position (thalami orientation: cavum septum pellucidum visualized below the frontal pole) Picture C: Transperineal ultrasound image depicting a right occiput anterior position (tip of the triangles pointing towards the occiput).

Conclusion
Ultrasound TP examination is accurate in the diagnosis of fetal occiput position during the second stage of labor.