INTRODUCTION
The established gold standard technique for cervical assessment during labour is the digital vaginal examination (DVE). However it can be inaccurate, insensitive and subjective. Transperineal ultrasound (TPU) has been recently introduced as a non-intrusive method for labour monitoring (1).
In this work we aimed to investigate its relevance in cervical dilation (CD) measurements during the active phase of labor (APL).

METHODS
A prospective comparative study enrolled 27 women in active phase of labor with a singleton fetus in cephalic presentation.
First, 2D transperineal CD measurements were performed (figure 1), followed immediately by DVE performed by another examiner. Both examiners were blinded to each other results. All women were interviewed and asked which method they preferred.
Statistical analysis was performed using XLSTAT version 2014.4.09 (Addinsoft, New York, NY, USA) and P < 0.05 was considered statistically significant. The Pearson correlation coefficient was used to assess the correlation between the two techniques and Bland–Altman plots were used to study the agreement between TPU measurements and DVE findings.

RESULTS
The total number of paired US and DVE assessment was 48 with a median of 2 per woman. CD measurements using TPUS was feasible in all cases .While the anteroposterior diameter (APD) was measured in all cases, the transverse diameter was visualized in only 15 cases. There was a strong correlation between the measurements recorded using the two techniques (R = 0.9, n=19; p < 0.0001) . Bland–Altman analysis illustrated a negligible level of systematic bias (-0.08 mm, 95% CI - 2.8-2.6). 95% limits of agreement were: -18.94 to 18.77mm. All patients expressed a preference for TPUS.

CONCLUSION
Ultrasound measurement of the CD during active phase of labor is a challenging technique that provides objective results.