INTRODUCTION
The transperineal ultrasound (TPU) was recently introduced as a noninvasive method for cervical dilation (CD) measurements during labor (1). Past studies have considered the anteroposterior diameter (APD) of the cervix as it was more frequently obtained during the active phase of labor until complete CD. Yet, during the latent phase of labor (LPL) both cervical diameters (anteroposterior and transverse) are visualized.

OBJECTIVES
To determine which diameter should be considered during the LPL in order to obtain the most relevant results.

METHODS
This is a prospective study including 43 women with a singleton fetus in cephalic presentation during LPL. The CD was assessed using 2D TPU and digital vaginal examination (DVE). First, transperineal CD measurements were performed followed immediately by DVE performed by another examiner. Both examiners were blinded to each other results. For each sonographic CD assessment, the APD and the transverse diameter (TD) were measured. The average of the two diameters (AD) was calculated and the relevance of the three measurements was evaluated comparing to the DVE findings.

Statistical analysis was performed using XLSTAT version 2014.4.09 (Addinsoft, New York, NY, USA) and P < 0.05 was considered statistically significant. Bland–Altman plots (BA) were used to study the agreement between TPU measurements and DVE for each diameter.

RESULTS
Eighty-one DVE were performed and a total of 243 TPU measurements were recorded. Using the APD: The correlation coefficient (CC) was $R = 0.5$ (n = 81; $p < 0.0001$). BA analysis illustrated a systematic bias of -1.06 mm (95% CI -3.22, 1.08). 95% limits of agreement were: -17.86 to 15.72 mm.

Using the TD: The CC was $R = 0.78$ (n = 81; $p < 0.0001$). BA analysis illustrated a systematic bias of 4 mm (95% CI; 2.6, 5.4). 95% limits of agreement were: -6.5 to 14.6 mm.

Using the AD: The CC was $R = 0.63$ (n = 81; $p < 0.0001$). BA analysis illustrated a systematic bias of -0.9 mm (95% CI; -0.7, 2.6). 95% limits of agreement were: -12 mm to 14 mm.

There was negligible difference between the three US measurement methods without impact on the management of the labor.

CONCLUSION
TPU is an easy and reliable technique to monitor the LPL. There is no significative difference whether we consider the anteroposterior, the transverse or the average of both cervical diameters.

REFERENCES