Comparison of cervical length using transabdominal versus transvaginal sonography in detecting a short cervix
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Objective
To determine the performance of transabdominal sonography by comparison with standard transvaginal sonography at the second trimester fetal anomaly scan for detecting a short cervix in general obstetric population.

Methods
This prospective cohort study evaluated a 307 pregnant women between 18 to 23+6 weeks of gestation attending for routine fetal anomaly ultrasound and offered universal transvaginal cervical length screening by a single experienced sonographer. The correlation of both measurements and diagnostic performance of transabdominal sonography for detecting cases with a cervical length ≤ 2.5 cm were evaluated.

Results
The mean transabdominal cervical length was 3.33 cm (SD 0.46 cm) and the mean transvaginal cervical length was 3.46 cm (SD 0.49 cm), not significantly different. The diagnostic performance of transabdominal measurement when cut-off ≤ 2.5 cm for detecting short cervix on transvaginal ultrasound of ≤ 2.5 cm was 100% sensitivity (95%CI, 69.2%-100%), specificity was 99.3% (95%CI, 97.6%-99.9%), positive predictive value (PPV) was 83.3% (95%CI, 51.6%-97.9%) and negative predictive value was 100% (95%CI, 98.8%-100%). The correlation coefficient being 0.92 (P<0.01).

Conclusion
Transabdominal sonography for cervical length measurement are significantly correlated with transvaginal sonography. Transabdominal sonography assessment could be used initially for cervical length screening together with fetal anomalies screening. Then, if the cervical length less than 2.5 cm, transvaginal sonography could be performed for confirm short cervix.