How to measure amniotic fluid index? Comparison of two methods (vertical to abdominal contour or floor)

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Objectives The transabdominal probe (TP) is recommended to be positioned usually vertical to floor and parallel to maternal sagittal plane when measuring amniotic fluid index (AFI). However, many examiners report AFI measured in different ways. This study was performed to investigate the difference of AFI according to the positioning of TP.

Methods AFI was measured in 212 gravidas without fetal abnormalities from 20\textsuperscript{th} to 40\textsuperscript{th} weeks of gestation by four experienced examiners according to the technique proposed by Phelan et al. Maternal abdomen was divided into four quadrants using the umbilicus and linea nigra as landmarks. AFI was generated by the sum of these four values without umbilical cord or fetal parts. In each patient, AFI was measured by four different ways, as shown in figure. Repeated Measures ANOVA was used for statistical analysis.

Results Mean gestational age at inclusion was 31.0 ± 5.2.

Conclusion AFI tends to be measured higher when TP kept vertical to maternal abdomen and parallel to maternal sagittal plane.