Introduction: Amniotic fluid volume is an important parameter in the assessment of fetal wellbeing. Oligohydromnios occurs in many high risk conditions and is associated with poor perinatal outcome. Many caregivers practice planned delivery by induction of labor or caesarean section after diagnosis of decreased amniotic fluid at term by an ultrasound. Decreased amniotic fluid volume is correlated with increased peripartum morbidity and mortality. Many ultrasonic methods are used to evaluate the amniotic fluid adequacy but which of these are the best, the current study will evaluate the different methods available and are commonly used in clinical practice.

Objective: 1. To compare the use of the amniotic fluid index with the single deepest vertical pocket measurement as a screening tool for decreased amniotic fluid volume.
2. Show the relation of that screening tool for evaluating oligohydromnios to common obstetric intervention used to terminate the pregnancy.
3. Study the effects of that method of assessing oligohydromnios, obstetric intervention on the neonatal outcome.

Materials and methods: 300 pregnant women attending Babylon maternity teaching hospital (both out-patient and in-patient) from 2002-2006, they were visiting the ultrasound department of that hospital after 34 weeks of their pregnancy for antepartum assessment of fetal well-being, a diagnosis of oligohydromnios was made by the ultrasonographer using 2 methods for evaluation, the deep amniotic fluid pocket <2cm x 1cm or amniotic fluid index = or < 5cm, then following the patients till labor was induced, or the women had cesarean section for fetal distress, neonatal outcome was followed also.

Results:
1. When the amniotic fluid index was used, significantly more cases of oligohydromnios were diagnosed and more women had induction of labor, 60% versus 15% in those with the diagnosis of oligohydromnios made by deep amniotic fluid pocket, P-value was 0.001.
2. Women with oligohydromnios diagnosed with AFI <5cm were more likely to undergo cesarean section delivery for fetal intolerance of labour (25% versus 10% in those with deep pocket), P-value was 0.014.
3. There was no difference between the 2 groups for neonatal outcome, including: admission to a neonatal intensive care unit, birth weight, the presence of meconium, an Apgar score of less than 7 at five minutes.

Conclusion: The present study shows that single deepest vertical measurement in the assessment of amniotic fluid volume during fetal surveillance seems a better choice since the use of the amniotic fluid index increases the rate of diagnosis of oligohydromnios without improvement in peripartum outcome.