INTRODUCTION

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Several investigators have demonstrated that prolongation of pregnancy beyond term is accompanied by a rise in perinatal morbidity and mortality **(Ariel et al., 1992; Michael et al., 1995 and Cunningham et al., 1997).**

Oligohydramnios has particular relevance to postterm pregnancies because the volume of amniotic fluid diminishes as gestation advances beyond term, therefore, ultrasonographic evaluation for the presence of oligohydramnios is extensively used for fetal testing in these pregnancies **(Michael et al., 1995).** Oligohydramnios in postterm pregnancies is associated with fetal heart rate decelerations and fetal asphyxia. A common belief is that the fetus with oligohydramnios is suffering from uteroplacental insufficiency, requiring it preferentially to shunt blood flow away from non-essential organs such as the kidneys. With less renal blood flow there would be decreased urine output and less amniotic fluid. The same mechanism is also assumed to cause a fetus to show other signs of distress **(Jodi et al., 1996).**

Numerous studies have shown that amniotic fluid volume assessment is critical in the evaluation of postterm gestation. **Crowley (1980)** found that the incidence of meconium stained liquor, fetal acidosis, cesarean section for fetal distress and low Apgar score were increased in postterm pregnancies complicated by decreased amniotic fluid volume.

Phelan (1987) found that adequate amniotic fluid volume in postterm pregnancies is a reliable predictor of fetal well-being and found a statistically increased incidence of cesarean section for fetal distress and

passage of meconium in cases of decreased amniotic fluid volume. Amniotic fluid volume assessment has been an effective method in predicting fetal distress in postterm pregnancy and has been significantly more accurate in predicting intrapartum fetal distress than non-stress test **(Tongsong and Srisomboon, 1993).**

Before the advent of ultrasound technology, amniotic fluid volume was usually estimated using indicator (dye) dilution techniques. These methods require amniocentesis to instill and recover the indicator and therefore have restricted clinical utility **(Ariel et al., 1992).** Real-time ultrasound allows non-invasive, semiquantitative amniotic fluid measurements to be conveniently made over a broad range of gestational ages. Ultrasonographic measurements of amniotic fluid volume are frequently expressed as a one dimensional linear distance of the largest pocket of amniotic fluid and called maximum pool depth (MPD) or a summation of these measurements over four uterine quadrants referred to as the amniotic fluid index **(Ariel and Michael, 1992 and Porter et al., 1996).**

The question of which ultrasound test to be used in postterm pregnancy may seem irrelevant to clinicians who based on the evidence from randomized trials and favor induction of labor after 41 weeks **(Crowely, 1995).**

A recent study showed that amniotic fluid index in normal pregnancy showed an orderly pattern of change with gestational age and there was no accurate correlation between amniotic fluid index and amniotic fluid volume, thus amniotic fluid index alone may lead to false interpretation of amniotic fluid status **(Hoskins, 1992).**

Analysis of data from a study comparing amniotic fluid index and maximum pool depth with a standard CTG done with both resulting in higher number of abnormal amniotic fluid index which led to more induction of labors, more cesareans, and more intrapartum electronic fetal monitoring inspite of no other statistically significant differences in outcomes related to labor and delivery, **(Alfirevic, 1995).**