arandomized comparison between amniotic fluid index and maximun pool depth in the monitoring of postterm pregnancy

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Post-term pregnancy is a pregnancy that has reached 42 weeks of completed gestation from the first day of last menstrual period or 40 weeks from the time of conception (Alan, 1994).Post-term pregnancy is associated with increased fetal mortality and maternal morbidity. (Lockwood et al., 1994).Oligohydramnios has particular relevance to post-term pregnancies because the volume of amniotic fluid diminishes as gestation advances beyond term (Divon et al., 1995). Ultrasound plays an important role in the antepartum fetal surveillance of post-term patients particularly in the determination of amniotic fluid volume and the management of post-term pregnancy depends mainly on antepartum fetal surveillance. Non reassuring fetal surveillance tests indicate termination of pregnancy by either induction of labor or cesarean section. If the results of fetal surveillance tests are reasuring together with certain date of pregnancy > 42 weeks, expectant management is the appropriate measure with the patient to avoid fetal morbidity (Cunningham, 1997).When we decide to do a conservative measure, an estimation of amniotic fluid volume by ultrasound is a standard part of fetal assessment (Fisher, 1993 and Divon, 1995).Maximum pool depth (MPD) is one of the oldest and most commonly used method for ultrasound assessment of AFV (Nwosu, 1994). The technique here is that described by (Chamberlaine and Colleagues, 1984), in which the patient is positioned supine and the vertical depth of the largest unobstructedZSZ St.Mil4RY21pool is measured. MPD 1.8 cm is considered abnormal (Alfirevie et al,1995).Amniotic fluid index is another method described by Phelan et -al. (1987) for qualitative assessment of amniotic fluid volume. The technique in volves dividing the uterine cavity into four quadrants utilizing the linea nigra as the vertical axis and the umbalicus as the horizontal axis in each quadrant the pocket of amniotic fluid with greatest depth is measured. The four measurements are added together and the sum represents the amniotic fluid index. AFI 5cm indicates oligohydramnios (Phelan et 1987).This study was carried out at obstetric unit of EL Agamy hospital, from may 1999 to September 2000 upon 100 post term pregnant women who have no medical or obstetrical problems and have a reliable gestational age of 42 weeks or more at initial evaluation.Each women was followed up by ultrasonographic examination of amniotic fluid volume using one of two techniques, amniotic fluid index or maximum pool depth. This evaluation of AFV was done twice weekly and accompanied with non stress test. Continuos fetal monitoring

throughout labor, grading of meconium, umbilical cord blood indices and assessment of fetal condition by 5 min. Apgar score were done.The aim of this work is to compare the impact of two different ultrasound methods, which are amniotic fluid index and maximum pool depth for assessing amniotic fluid volume on the perinatal outcome in post term pregnancies. We found that there were significantly more abnormal amniotic fluid indices than the number of abnormal maximum pool depths (28% versus 10%). This resulted in increased number of obstetrical interventions in the form of induction of labor and C.S in AFI group more than in MPD group. There were more induction for decreased AFV in the AFI group(30% against 12 %) and there was a trend towards more cesarean sections for fetal distress in the AFI group (8% versus 4%).This result can be justified only if there is improvement in perinatal outcome. Our study showed no improvement in perinatal outcome in AFI group inspite of higher number of obstetrical interventions. Two cases in each group showed abnormal results in the form of abnormal cord PH, Apgar score