INTRODUCTION
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For decades amniotic fluid volume has been known to play a significant role in obstetrical management for timely delivery and subsequent foetal outcome. Sonographic estimation of amniotic fluid volume is commonly used as a diagnostic method for oligohydroamnios. Ultrasound technique being non-invasive; is very safe and effective investigation in antenatal period and has come up one of the principle means to study antepartum foetal surveillance.

Normal amniotic fluid volume at term is 300-1200 ml and amount less than 100 ml is termed as oligohydroamnios and amount greater than 2000 ml as polyhydroamnios. The association between abnormalities of amniotic fluid volume and altered perinatal outcome has long been recognised.

Antenatal recognition of oligohydroamnios has traditionally been based on clinical examination of the patient which is exceedingly difficult and frequently inaccurate. A symphysis fundal height either less than or greater than expected for gestational age should alert the clinician to the possibility of amniotic fluid volume abnormality. More reliable methods for detecting oligo and poly-hydroamnios are Radiography (plain X-ray
abdomen, amniography) and sonography (measurement of total intrauterine volume) techniques. The result of these methods which are either invasive or time consuming or both, have been disappointing and a simple, clinically applicable and reliable method for assessing amniotic fluid volume is needed.

Recently ultrasonographic visualization of amniotic fluid has given rise to both subjective and semiquantitative method of fluid estimation. Oligo-hydroamnios is noticed by very little fluid surrounding the foetus (thus difficulty in defining the foetal boundaries as foetal abdominal circumference) is subjective method (Hadlock). Semiquantitative approach typically estimate amniotic fluid volume by measurement of depth or width of the largest clear amniotic fluid pocket, as reported by many authors (Bastide et al, Manning et al, 1981; Chamberlain et al, 1981 and Philipson et al, 1983). However, methods of measurement and diagnostic criteria are controversial.

Phelan et al (1987) introduced four quadrant technique as amniotic fluid index for assessment of amniotic fluid volume. This thesis work has incorporated similar technique as by Phelan, to study amniotic fluid index to assess amniotic fluid volume.
The use of ultrasound in antepartum foetal surveillance has allowed a more complete evaluation of the foetus and its intrauterine environment. A markedly diminished amniotic fluid volume has been accepted as abnormal biophysical profile. In our study oligohydroamnios is correlated with foetal heart rate in predicting the perinatal outcome. In this study we found out that amniotic fluid index method is a reliable technique to evaluate the amniotic fluid volume and correlating with the foetal outcome.

AIMS OF THE STUDY

This study was done with the following aims:–

1. To evaluate the normal range of amniotic fluid index in term pregnancy.

2. To find out oligohydroamnios cases and to correlate it with foetal heart rate and foetal surveillance perinatally and the mode of delivery.

3. To study the amniotic fluid index in IUGR and postdated pregnancy.