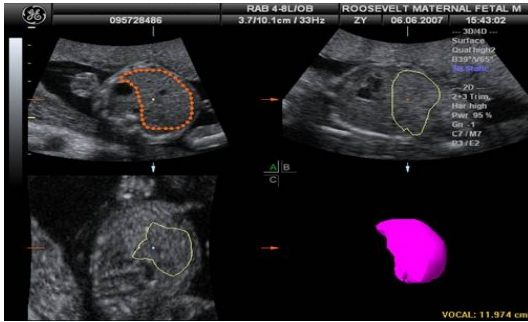


Objective

To use fetal liver volume in second trimester as a predictor of fetal growth

Material and Methods



222 patients had fetal liver volume measured in second trimester at (18-22wks) during routine anatomy scan using Voluson 760 and E8. Volume scans were stored and liver volume was measured using Vocal of 4D view program with 30 degree rotation. Measurements were performed prior to delivery and by observers unaware of any patient's clinical data. Average of two measurements was then used to assign liver volume percentile for each week of gestation. Actual fetal birth weights at term were compared between groups of fetuses with liver volumes below 50th percentile and above 50th percentile. Incidence of diabetes was also recorded.

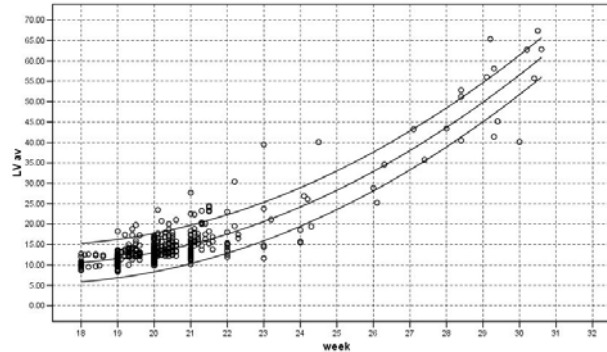


Fig.2. Ultrasound measurements of the fetal liver volume

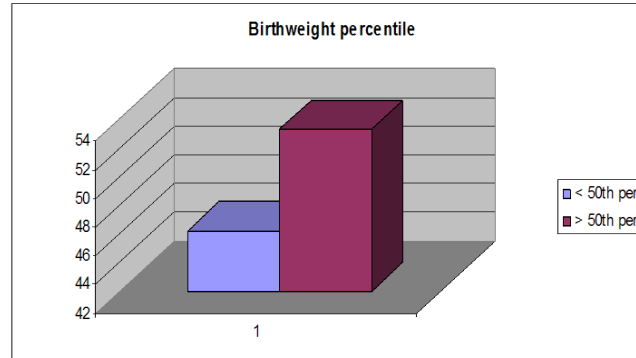


Fig.2. Fetal liver volume vs birth weight percentile

Results

Mean fetal birth weight percentile at term was higher in the group that had liver volume > 50 percentile in early pregnancy than in fetuses with liver volume below 50th percentile (difference statistically significant at $P < 0.05$).

Remarkably, in this group, the incidence of diabetes was 12%, higher than 8% found in patients with liver volume below 50th percentile

Conclusion

We conclude that increased fetal liver volume in mid trimester is associated with increased fetal weight at birth and more frequent diabetes in pregnancy.