

EVALUATION OF I.U.G.R. BY ULTRASOUND

By

JAIDEEP MALHOTRA, K. SAXENA, NARENDRA MALHOTRA AND S. K. BHARGAVA

SUMMARY

Ultrasound, today offers a single non-invasive reliable method for assessment of fetal growth and diagnosis of I.U.G.R. In the present study I.U.G.R. was overdiagnosed by ultrasound.

Introduction

Ultrasonar is a single, non-invasive safe, quick and reliable method for assessing fetal growth with a high percentage of accuracy.

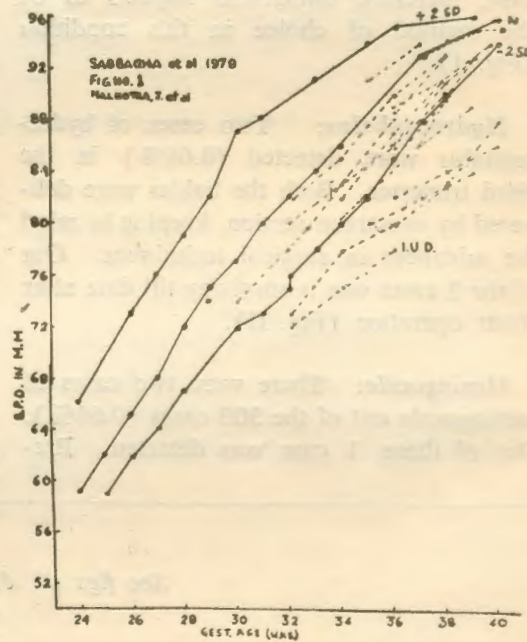
With the advancement of equipment technology and real time machines it has today become possible to objectively assess the growth by multiple parameters.

Material and Methods

Three hundred cases were scanned in the 2nd and 3rd trimesters of pregnancy for various indications. Cases were scanned by real time linear scanner SEIMENS 2380.

Out of 300 cases, 19 cases of clinically suspected I.U.G.R. were evaluated in detail by biparietal diameter, femur length and abdominal circumference. The results were plotted on graph according to Sabbagha and Turner 1978 and Hadlock 1982.

Biparietal diameter was taken at the plane of 3rd ventricle (as described by Roy



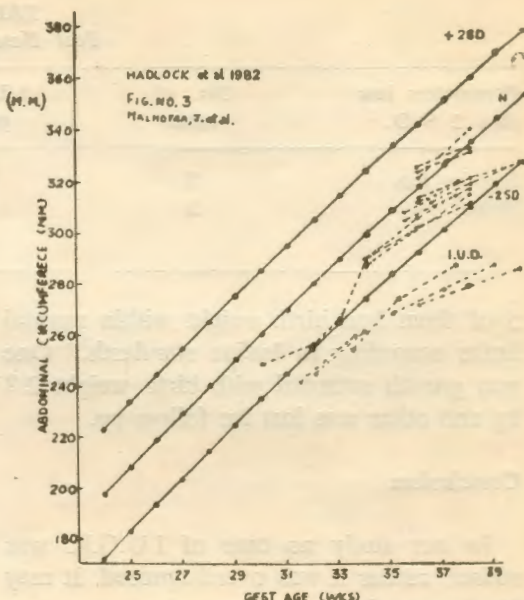
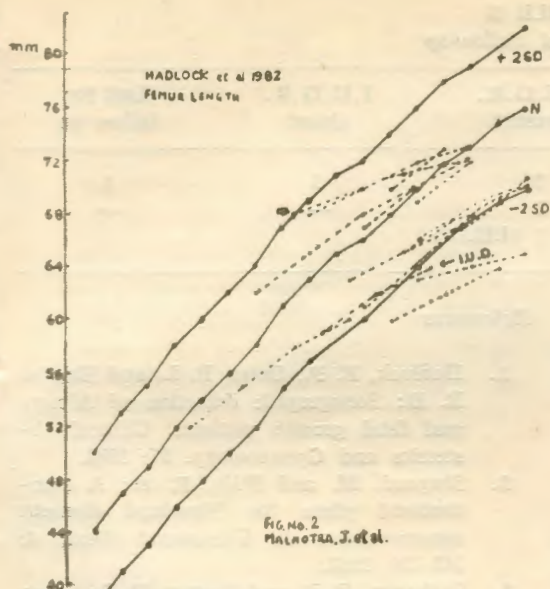
Filliy). Femur length was estimated by Caliper measurement and abdominal circumference was measured at level of umbilical vein.

Observations and Results

In 19 cases I.U.G.R. was clinically suspected as the fundal height was 4 weeks less than the period of gestation. Most of

From: Department of Obstetrics & Gynaecology, J. N. Medical College, Aligarh Muslim University, Aligarh.

Accepted for publication on 1-10-86.



these cases were serially scanned by ultrasound at 2 weeks interval. B.P.D., femur length and abdominal circumference were noted in every case as shown in Fig. 1, 2 and 3. Post delivery weight and maturity of these babies was noted.

There were 3 cases in which all the parameters were 2 S.D. below normal and two of these babies when delivered had birth weight less than 2.2 kg while in the other case there was intrauterine death near term. (Table 1)

There were 7 cases where one or two parameters were 2 S.D. below. Only one of these had birth weight less than 2.2 kg.

One was lost for follow up and rest 5 cases had birth weight within normal limits according to Indian standards but less than 3 kg. In Borderline cases none of them had birth weight below 2.2 kg. (Table 2)

Discussion

In our study it was seen that accuracy of diagnosis was much more when all the 3 parameters taken were below 10 percentile. Of these 3 cases, 2 had birth weight below 2.2 kg and the third died in utero near term and the weight was much below normal.

While in 7 cases where one or two parameters were below normal or borderline,

TABLE I
Sonar Findings of Clinically Suspected I.U.G.R. Cases

Clinical Diagnosis	Ultrasound			
	Parameter	B.P.D.	ABDC	F.L.
I.U.G.R. 19	Normal	9	8	12
	Borderline	3	3	4
	<2 S.D.	7	8	3

TABLE II
Post Natal Follow-up

Parameters less than 2 S.D.	No. of cases	I.U.G.R. present	I.U.G.R. absent	Lost for follow up
Two or less	7	1	5	1
Three	3	2 1 (I.U.D.)	—	—

5 of them had birth weight within normal limits according to Indian standards. One was growth retarded with birth weight 2.2 kg and other was lost for follow up.

Conclusion

In our study no case of I.U.G.R. was missed, rather it was overdiagnosed. It may be due to falacy of not using parameter normograph of Indian Standards.

References

1. Hadlock, F. P., Deter, R. L. and Harrist, R. B.: Sonographic detection of Abnormal fetal growth patterns. Clinical obstetrics and Gynaecology. 27: 1984.
2. Shepard, M. and Filly, R. A.: A standardized plane for Biparietal diameter measurement. J. Ultrasound Med. 1: 145-150, 1982.
3. Sabbaaga, R. E. and Turner, H. J.: Sonar B. P. D. and fetal age. Obstet. Gynec. 43: 7. 1974.