

ULTRASONIC PLACENTAL LOCALISATION IN A.P.H.

CHARITRA SAIKIA • ASISH KUMAR BHATTACHARJEE
GOKUL CHANDRA DAS • RAMA KANTA DAS

SUMMARY

Ultrasonic localisation of placenta was carried out in one hundred cases of antepartum haemorrhage (A.P.H.). The clinically obvious cases of accidental haemorrhage were not included in this study. In sixty cases, placenta was found in the lower uterine segment. These sixty cases required caesarean section where the placental site as diagnosed by ultrasound were co-related to clinical types. The ultrasonic diagnosis was correct in fifty seven cases showing an accuracy rate of ninety five percent.

Introduction

Ultrasonic localisation of placenta has completely revolutionised the management of antepartum haemorrhage. Wexler and Gottesfeld(1977) described the localisation of different types of low lying placenta by ultrasonographic study in his monograph. King (1973) suggested posterior placenta previa if the "head to sacral promontary distance" is more than 15 mm.

Considering the clinical importance of placental localisation in the management of antepartum haemorrhage, the present study was carried out with the following aims and objectives.

1. To find out the sites of placenta in cases with antepartum haemorrhage.
2. To find out the accuracy of placental localisation by ultrasound in cases where caesarean section was contemplated.
3. To co-relate the ultrasonic placental location with different clinical types of placenta previa.

Material and method

The study consisted of one hundred pregnant women with antepartum haemorrhage. Only the symptomatic cases of bleeding per vagina after twenty weeks of gestation were selected for the study. Clinically significant cases of accidental haemorrhage were not included in this study. All the cases were subjected for ultrasound seanning for placental localisation

after admission in the hospital.

Follow-up scans were done in those cases where initial ultrasound scan revealed the placenta in the lower uterine segment on or before 32 weeks of gestation.

Equipment

The equipment being used was a Technicare EDP 1200s ultrasound machine. The instrument is basically a static scanner with Real time sector attachment. It has a camera attached to it. The method described by Donald and Abdulla (1968) has been used in this study.

Results and observations

There were 13 (13%) cases of primigravida and 87 (87%) cases of multipara of which P² constituted the major fraction (40%). There were only 11 (11%) cases of grand multi in the present study. 47 (47%) cases were in the age group of 26 and above, and only 22 (22%) cases were found in the age group of 16-20 years.

There were 15 (15%) cases of abnormal presentation among which 10 (10%) cases of breech and 5(5%) cases of shoul-

der presentation. There were 84 (84%) cases of cephalic presentation and only one (1%) case of twin pregnancy showing 1st breech and 2nd cephalic presentation.

There were 93 (93%) cases of longitudinal lie, 5 (5%) cases of transverse lie and only 2 (2%) cases of unstable lie in this study.

Among 87 (87%) cases of multipara, 77 (77%) cases had previous spontaneous delivery and 10 (10%) cases had previous caesarean section.

Ultrasound evaluation of cases

The distribution of placental sites on initial ultrasound scan according to period of gestation is presented in Table-I.

Table-II shows the distribution of placental sites on follow up scan. Also it shows the incidence of placental migration to the upper uterine segment. Follow up study was done in 11 cases after 34 weeks of gestation, out of 16 low lying placenta diagnosed within 32 weeks of gestation at initial scan. The remaining 5 cases required earlier operative intervention due to bleeding.

TABLE-I
DISTRIBUTION OF PLACENTAL SITES ON INITIAL SCAN

Period of gestation on initial scan (in weeks)	Number of cases	Placental Site			
		Upper uterine segment	Marginal placenta previa	Partial placenta previa	Central placenta previa
20 - 28	6	2	3	1	0
29 - 32	24	12	4	4	4
33 - 36	52	19	9	14	10
37 - 40	18	4	1	6	7
Total	100	37	17	25	21

Central placenta previa did not show any change of position or migration on rescans. It was interesting to observe that 2 out of 4 in marginal placenta previa and 1 out of 4 in partial placenta previa showed ultrasonic evidence of migration to the upper uterine segment. The incidence of migration was in 3 (27.3%) out of 11 cases.

Discussion

This study of placental localisation by ultrasound in cases of antepartum haemorrhage proved that the method is simple and reliable with a fair degree of accuracy. The accuracy obtained in our study was 95 percent which is comparable with the accuracy reported by Donald and

TABLE-II
PLACENTAL SITES ON FOLLOW UP SCAN

Period of gestation on follow up scan (in weeks)	Number of cases	Placental Site			
		Upper uterine segment	Marginal Placenta Previa	Partial Placenta Previa	Central Placenta Previa
Initial Scan: 20 - 32	30	14	7(3)	5(1)	4(1)
Follow up Scan: 34 onward	11	3	2	3	3

Figures in parenthesis indicate earlier operative intervention.

TABLE - III
CLINICAL TYPES OF PLACENTA PREVIA AND ACCURACY OF PLACENTAL LOCALISATION AS SEEN ON CAESAREAN SECTION

Ultrasonic location of Placental site	Type-IV	Type-III	Type-II	Type-I	Wrong Diagnosis
Central Placenta Previa	13	7	0	0	1
Partial Placenta Previa	0	6	16	0	2
Marginal Placenta Previa	0	0	8	7	0

Table-III shows the correlation of ultrasonic placental location with clinical types and the accuracy of placental localisation as seen on caesarean section. In 60 cases, placental location was confirmed by directly viewing at caesarean section. In 57 (95%) cases ultrasound prediction of placental site was found correct. In the remaining 3 (5%) cases, ultrasound prediction of placental site was found wrong, showing an accuracy rate of 95 percent in this study.

Abdulla (1968), Kaboyashi et al (1970), and Kumari and Seetha (1985).

The placenta lying in the lower uterine segment in early weeks of pregnancy (before 32 weeks) was reported to be anatomical variant (King, 1973); (Wexler and Gottesfeld, 1977). This is consistent in our study showing the incidence of placental migration to the upper uterine segment of 27.3 percent.

In this study, false positive diagnosis

was made in 3 cases accounting for 5 percent wrong ultrasound prediction. At operation, placenta in these 3 cases were found to be located in the upper uterine segment.

In one case, extra-amniotic blood clot was found at caesarean section instead of central placenta previa. The findings of extra-amniotic blood clot may have given us the false impression of placenta previa. This was also observed by Williams et al (1977). In the remaining 2 cases, small amount of clotted blood in the cervical region and retro-placental blood clot were found at caesarean section instead of our diagnosed finding of partial placenta previa. The similar condition of collected blood in the cervical region mimicking placenta previa was reported by F.G. Laing (1981). All these 3 cases were labelled to be cases of accidental haemorrhage after the operative findings.

Conclusion

The method of ultrasonic placental localisation is simple, easy to acquire and gives reliable prediction, without any adverse effect either to the foetus or to the mother.

Acknowledgement

We are grateful to the Principal and the Superintendent of Gauhati Medical College and Hospital, Gauhati, for allowing us to use the hospital records in this paper.

References

1. Donald, I. and Abdulla, U.: *J. Obst. Gynae. Brit. C. Wealth.*, 75:998-1968.
2. Kaboyashi, M., Hellman, L.M. and Fillisti, L. (1968): *Am. J. Obstet. Gynec.*, 106: 279-1970.,
3. King, D.L. *Radiol.*, 109-1973.
4. Kumari, K.C. and Seetha, T. *J. Obstet. Gynaec India.*, 35(3): 431., 1985
5. Laing, F.C., *J. Clin. Ultrasound*, 9: 109-1981
6. Wexler, P. and Gottesfeld, K.R., *Obstet. Gynaec.*, 50: 706- 1977.
7. Williams, C.H., Van Bergen, W.S., *J. Clin. Ultrasound*, 5: 45-1977.