

Brow Presentation

By
H. C. ONG, M.B.B.S., M.R.C.O.G.
and
PANIR CHELVAM, M.B.B.S.

Department of Obstetrics and Gynaecology,
University Hospital,
Kuala Lumpur,
Malaysia.

Brow presentation is an uncommon complication of labour and is the most unfavourable of all cranial presentations. Several factors have been implicated in its causation but in the majority of cases, the cause is unknown. In its management, the trend has shifted from a more conservative attitude to a more liberal use of caesarean section.

This paper presents our experience with six cases of brow presentation in labour seen at the University Hospital, Kuala Lumpur. The essential clinical features and views on management of this complication are discussed.

RESULTS AND DISCUSSION

1. Incidence

Between 1968 to July, 1974, six cases of brow presentation in labour were seen out of a total of 15,990 hospital deliveries, the incidence therefore being 1: 2665 deliveries. Two patients were Chinese, two were Orang Aslis, one was Indian and one was Malay.

Reported incidences vary from 1: 514 to 1: 3000 deliveries (1, 2, 3, 4, 5, 8). Donald (2) (1972) commented that the complication is rare and incidences vary widely.

2. Predisposing Factors

(i) Parity

Three patients were primigravidas and 3 were multigravidas: the pattern comparable to reported

figures of 52.4% and 47.6% respectively (4). Parity is therefore unlikely to be a factor.

(ii) Cephalo - Pelvic Disproportion

In 4 patients, the maternal pelvis was average gynaecoid based on both clinical and radiological assessment. There was radiological evidence of pelvic contracture resulting in cephalo-pelvic disproportion in one patient (16.67%). The maternal pelvis was borderline by radiological assessment in the other patient. Foeto - pelvic disproportion has been suggested to be an important factor in the causation of brow presentation, the incidence varying from 7.7% to 53.8% (3, 4, 5).

(iii) Prematurity and Big Babies

In two patients (33.33%), the baby's birth-weight was less than 2500 g. One of these patients had, in addition, the factor of pelvic contracture.

Prematurity has been suggested to be the other important factor in the causation of brow presentation, being present in 5.8% to 64.0% of cases (3, 7).

Not only is a smaller baby prone to brow presentation, but a large baby of over 8 pounds is similarly prone (4). This factor is not present in our patients: the birth-weights of the remaining babies ranged from 3160g to 3480g.

(iv) Foetal Abnormality

One patient delivered an anencephalic foetus of 6 pounds 13 ounces (16.67%). Anencephaly could present as a brow, though it more commonly presents as a face (6, 7).

(v) Nuchal Cord

This was present in one patient (16.67%) where the diagnosis of brow presentation was made during pregnancy and Caesarean section was done for persistent brow in labour. There was no evidence of nuchal cord in the other 5 patients. Kovacs (4) (1970) noted this factor in 14.3% of cases.

Other factors that have been associated with brow presentation include uterine abnormality, uterine myoma, placenta praevia and Premature rupture of membranes (4). These were not present in any of our patients.

3. Time of Diagnosis

The diagnosis of brow was made during the first stage of labour in 3 patients (50.0%); two in early first stage and one in late first stage. It was apparent only in the second stage in 2 patients (33.33%) and only in one patient was the diagnosis made during pregnancy (16.67%).

This pattern is comparable to reported figures of 9.5% of diagnosis made during pregnancy, 52.4% in the first stage and 38.1% in the second stage or at delivery (1, 3).

4. Position of the foetal head before diagnosis

In 5 patients (83.33%), the head was not engaged during labour. In one patient, the head was engaged in the occiput-posterior position with deflexion; the subsequent brow presentation probably secondary to increasing deflexion.

The brow was anterior in 2 patients (33.33%), posterior in one patient (16.67%) and transverse in 3 patients (50.0%) compared to reported figures of 51.0%, 21.0% and 28.0% respectively (1).

5. Other complications of labour

Dysfunctional labour was present in one patient (16.67%), in whom caesarean section was done after 21 hours in labour. There were signs of obstructed labour at operation.

Meltzer et al (5) (1968) reported a 30.5% incidence of dysfunctional labour in association with brow presentation.

6. Mode of Delivery

In 5 patients (83.33%) the mode of delivery was caesarean section. In one patient with the anencephalic foetus, mid-cavity forceps was applied following manual conversion to face presentation (mento-anterior); cleidotomy was done for shoulder-

dystocia and a fresh - stillbirth was delivered.

In the literature (1, 3, 4, 5, 6, 8), spontaneous brow delivery is said to occur in 7.0% to 45.0% of patients and forceps delivery following spontaneous or manual conversion in 20.0% to 60.0% of patients. The caesarean section rate varies from 20.0% to 70.0%.

The majority opinion favours caesarean section for brow presentation in labour (2, 3, 4, 6, 7). The few who advocate a trial of brow (1, 5, 8) nevertheless suggest caesarean section if there is contracted pelvis; a term baby with average size; brow posterior or if the foetal station is high; and caesarean section in labour if there is no progress or if labour is arrested at the phase of active acceleration or prolonged at the deceleration phase or during the second stage.

A full trial is allowed if the brow is engaged and labour progresses well to full dilatation, at which either one allows a spontaneous brow delivery or forceps delivery following conversion. Still, caesarean section will be performed for failed conversion or failed forceps.

7. Viability of foetus

All 5 babies delivered by Caesarean Section were live-births and were well 6 weeks after delivery. The only foetal death was related to anencephaly which is not compatible with continued existence of the foetus and therefore probably not related to the brow presentation.

The general opinion is that foetal morbidity is increased following spontaneous or manual conversion and especially following internal podalic version and breech extraction (4), the incidence being 50.0% to 100.0% while it is about 20.0% following caesarean section.

Similarly, foetal mortality is high following manual conversion and failed forceps (16.0% to 60.0%) and following internal podalic version and breech extraction (100.0%) (3, 4). The perinatal loss is 12.8% following spontaneous brow delivery. With primary caesarean section for brow presentation in labour, there should be no foetal loss (3, 4, 8).

The morale is that the best foetal results are associated with the least amount of interference vaginally.

COMMENT

Several relevant facts about brow presentation

in labour should be kept in mind, viz:

- a) In the majority of cases (over 75.0%), the cause is unknown. Prematurity and foeto-pelvic disproportion are probably important factors in its causation. The influence of foetal abnormality and nuchal cord complications may be significant.
- b) In a brow, the largest diameter of the head presents, that is, the mento-vertical diameter of 13.5 cm. Engagement is possible *only* if the baby is very small or if the maternal pelvis is more than normal size (2, 6, 7);
- c) Opportunities for the relative *safe* delivery of these patients other than by caesarean section are rare because the doctor has seldom much personal experience with these conversion procedures which are *not* simple;
- d) There is no place for internal podalic version and breech extraction in a brow presentation in labour;
- e) Foetal prognosis is improved by less interference vaginally and by the more frequent use of caesarean section as the mode of delivery;
- f) The more liberal use of caesarean section in this complication is recommended as this seems the only sensible and obvious treatment.

ACKNOWLEDGEMENTS

The authors thank Professor T.A. Sinnathuray

for his encouragement and Miss Magasvari for secretarial assistance.

REFERENCES

1. Abell, D.A., (1973), "Brow Presentation — A Review of 70 cases", *S. Afr. Med. J.*, 47: 1315 — 8.
2. Donald, I., (1972), "Brow Presentation" in "*Practical Obstetric Problems*", 4th Edition, Lloyd-Luke (Medical) Books Ltd., London, p 356.
3. Ingolfsson, A., (1969), "Brow Presentation", *Acta Obst. & Gynec. Scand.*, 48: 486—96.
4. Kovacs, S.G., (1970), "Brow Presentation", *Med. J. Aust.*, 2: 820—4.
5. Meltzer, R.M., Sachtleben, M.R., and Friedman, E.A., (1968), "Brow Presentation", *Amer. J. Obst. & Gynec.*, 100: 255—63.
6. Moir, J.C., and Myerscough, P.R., (1972), "Brow Presentation", in "*Munro Kerr's Operative Obstetrics*", 8th Edition, ELBS. Bailliere-Tindall, William Clowes & Sons, London, p 130.
7. Morris, E.D., (1972), "Brow Presentation", in "*Integrated Obstetrics and Gynaecology for Post-Graduates*", Edited. C.J. Dewhurst, Blackwell Scientific Publications, Oxford, p 360—362.
8. Voight, J.C., (1967), "Brow and Face Presentation", *Int. Surg.*, 48: 83—9.