A STUDY OF 104 CONSECUTIVE CASES OF SHOULDER PRESENTATION

by

SARAH I. JACOB,* M.D. (Bom), F.R.C.O.G. (London)
HITESH BHARGAVA,** M.S.

In India, the incidence of transverse lie and shoulder presentation still remains very high, the major factor responsible being multiparity and lack of antenatal care. It is a rare condition in the more developed parts of the world. A review of 104 consecutive cases of transverse lie admitted from Jan. 1968 to Dec. 1970 is presented. The hospital serves a wide area and is the only hospital in the region with specialist services. Most of the patients were admitted without receiving any preliminary aid. The majority of the cases were admitted late in labour with hand prolapse, absent foetal heart or the foetus in a condition of extreme foetal distress, exhaustion of mother, the uterus contracted over the foetus and the cervix half or more dilated.

Incidence:

The incidence of transverse lie in our series comes to 1 in 64 which is very high as compared to other authors, except with Nargis Dalal (1970) whose incidence is 1 in 49 as shown in Table I. This higher incidence is mainly due to lack of antenatal care and in part due to ignorance on the part of the patient and availability of experienced medical and nursing personnel.

TABLE I

Showing the Incidence by Different Authors

Hall and O' Brien	(1961)	1 in 217
Garber and Ware	(1951)	1 in 419
Ramavaish	(1962)	1 in 86
Mahale	(1963)	1 in 466
Chakravarty	(1964)	1 in 133
Parikh	(1964)	1 in 107
Nargis Dalal	(1970)	1 in 49
Present series	(1968–70)	1 in 64

Age:

Table II shows that maximum number of patients were between the age of 23-30 years. The youngest was 18 and oldest was 43 years of age.

TABLE II

Showing Age Incidence in Shoulder Presentation

Age in Years	No. of Cases
18—22	18
23—30	62
31—38	22
39 onwards	2

Parity:

Table III shows the cases in different parity groups. Multiparity in transverse

*Professor and Head.

**Reader.

Department of Obstetrics and Gynaecology S.M.S. Medical College, Jaipur.

Received for publication on 29-3-71.

lie was present in 58.6% of cases as compared to Chakravarty series in which multiparity was present in 49.2% of the cases. The majority of the cases were parity five and above. The incidence of transverse lie in primiparae was 8.6% as compared to Hall *et al* (1961) 8%, Dalal (1970) 25% and Chakravarty (1964) 11% of cases.

TABLE III

Showing Cases in Different Parity

Parity	No. of Cases
I	9
II	5
III	21
IV	8
V	18
Grand multipara	43

Etiological Factors:

Table IV shows the different etiological factors. Multiparity was the main factor while in 31 cases no cause could be found.

TABLE IV

The Etiological Factors

Etiology	No. of Cases
Multiparity	61
Contracted pelvis	3
Twin pregnancy	1
Placenta praevia	8
Not known	31

Duration of Labour:

Most of the cases were in advanced labour. Thirty-seven, cases i.e. 35.6% of the cases were admitted within 10 hours of the onset of labour while 57, i.e. 54.8% were between 10 to 24 hours and 10 cases i.e. 9.6% were in labour for more than 24 hours.

Table V shows that 10 patients were seen with the presentation of the upper limb, in two cases it was elbow, in two hand and in the rest of the cases it was shoulder. The presenting part was in the pelvic cavity and the membranes were intact. In 64 cases the hand had prolapsed outside the introitus and in 20 cases there was both hand & cord prolapse out side the introitus.

TABLE V

Mode of Presentation

Mode of Presentation	No. of Cases
Presentation of upper limb	10
Hand prolapse	64
Cord and hand prolapse	20
Impacted shoulder	10

Antenatal Care:

Only 4.9% patients had antenatal care. The rest were emergency admissions in advanced labour with varying degree of dilatation of the cervix.

Associated Complications:

Rupture of the uterus was present in 6 cases and was diagnosed before laparotomy. Placenta praevia was present in 8 cases, contracted pelvis in 3 and constriction ring in 2 cases.

Method of Delivery:

General management in all cases consisted of fluid infusion, broad spectrum antibiotics, treatment of acidosis and shock if any and blood transfusions in cases of ruptured uterus whenever it was available. The methods employed in our series for effecting delivery were mostly internal podalic version and caesarean section as shown in Table VI.

TABLE VI

Mode of Delivery

Method of Delivery	No. of Cases
1. Internal podalic version	73
2. Caesarean section	20
3. Spontaneous delivery	2
4. Total hysterectomy	3
5. Repair of rupture uterus	3
6. External cephalic version followed by normal delivery	1

Internal podalic version formed the main line of treatment in 73, i.e. 70% of the cases. In almost all the cases the membranes had ruptured for one to 5 hours before an attempt for internal version. In almost all the cases the genital tract was infected and cervix was four-fifth or fully dilated. In most of the cases, hand had prolapsed for 2 to 10 hours before version. In two cases caesarean section had to be performed after the version failed and in one case failure was due to the presence of a constriction ring. There was no maternal death and no patient had rupture of the uterus during this manipulation and all had uneventful recovery. The uterus was explored after version in all the cases.

Out of 73 cases in whom internal podalic version was done, in only 23 cases foetal heart was present on admission. Of these 231 cases only 19 babies were born alive. Hence the foetal wastage by internal podalic version is 4 babies i.e. 17.3%.

Caesarean section was done in 20 selected cases with different indications as shown in Table VII. In 2 cases classical caesarean section was done for constriction ring. All the patients had uneventful recovery except postoperative pyrexia from 100 to 103F which was expected in these handled cases. The sepsis in all the cases were controlled by broad spectrum antibiotics. All the babies were born alive, except the seven cases in whom the foetal heart sound were absent on admission

In 3 cases hysterectomy had to be done for ruptured uterus, while in 3 cases of ruptured uterus repair of rent and sterilisation was done.

External cephalic version was done in one case who came in early labour with intact membranes and was delivered normally.

Spontaneous delivery occured in four patients after baby being doubled up. All the babies were premature under four pounds. One baby was living and later died in neonatal period and three were stillborn.

Maternal Results : are shows in Table VIII. There were four maternal deaths.

TABLE VII

Indications for Caesarean Section

Indications	No. of Cases
1. Cervix two finger dilated ..	6
2. Cord prolapse	2
3. Failed internal podalic version	1
4. Contracted pelvis	2
5. Impacted shoulder with threatening rupture of the uterus ..	4
6. Placenta praevia	3
7. Construction ring	2

TABLE VIII

Maternal Results

Maternal Results	No. of Cases
1. Uneventful (except for pyrexia under 101°F for few days) ..	65
2. High pyrexia	7
3. Vesico vaginal fistula	2
4. Gross wound sepsis	2
5. Rupture uterus	6
6. Deaths	4

Pyrexia above 101 F was present, in seven patients during post operative period. The cause of fever was either

TABLE IX

Foetal Results

	Caesarean section	Rupture uterus	Internal podalic version	Spontaneous delivery
Live birth ..	13	..	19	1
Stillbirth ..	7	6	54	3

sepsis or urinary infection. Gross sepsis of the wound was present in 2 cases. Two cases developed vesico-vaginal fistula. Four cases out of six of ruptured uterus died. The maternal mortality was 3.8% as shown in Table X and compared with other authors:

TABLE X

Maternal Mortality

Name of Author	No. of Cases Treated	Maternal Mortality
1. Rama Vaish (1962)	100	3%
2. Webster and Geittmann (1956)	100	Nil
3. Parikh and Parikh (1964) ..	37	Nil
Present series ..	104	3.8%

Foetal results

There were 34 live births including the one delivered after external cephalic version. There was one neonatal death in the case who delivered spontaneously. The cause of death was prematurity.

There were 70 stillbirths out of 104. Out of these 66 were dead on admission. Four babies were lost during internal podalic version.

Hence the foetal wastage including one neonatal death in this series of transverse lie is 68.2% as compared to Rama Vaish (1962) in whose series it was 77%.

Discussion:

The very high incidence of transverse lie is due to lack of antenatal care. In the present series no cause of transverse lie could be detected in 34 (32%) of the cases in contrast to Hall *et al* (1961) in whose series no cause could be found in 79% of the cases. The most common etiological factor observed was multiparity in 58.6% of the cases.

Most of the patients were admitted in advanced labour complicated with prolapse of hand, cord or both and with absent foetal heart sounds with cervix sufficiently dilated to do an internal version. The management of shoulder presentation in advanced labour was by internal version and caesarean section.

It is notworthy that internal podalic version and breech extraction was the main line of treatment in our series with no maternal death. This line of treatment was also present in the majority of the cases in Vaish (1962) and Parikh (1964) series. Winkler and Congello (1960) are of the opinion that uncomplicated transverse lie should not be taken as an absolute indication for caesarean section. Early diagnosis, close observation and management by an experienced person can give equally good results if managed vaginally.

If internal version is carefully done the risk of rupture can be minimised. The decision can only be made after the patient is anaesthetised. If the uterus relaxes in between contractions and there is no retraction or contraction ring, internal podalic version can be attempted gently by an experienced person. Increased number of versions has minimised caesarean sections. In cases where the foetus was already dead internal podalic version gave much better post operative period than in caesarean section cases, because these cases are usually infected and give a stormy post-operative period after caesarean section. Most of them are also anaemic and stand blood loss adversely.

Sometimes it may be very difficult to decide as to which method to employ. Chassar Moir says that if an obstetrician is in that frame of mind, he advises him to choose caesarean section in the hope of saving the child, as the risk of infection can be combatted by antibiotics. This lessens the dangers of difficult versions

such as shock and ruptured uterus. But the child may be lost while preparing the patient for caesarean section or during neonatal period.

Besides the risk of uterine rupture, the shock of deep anaesthesia and intrauterine manipulations may be much greater than that associated with an abdominal delivery. The risk of infection can be combatted by antibiotics, hence the neglected shoulder presentation may be delivered by caesarean section under cover of antibiotics instead of subjecting the mother to greater risk of uterine rupture and shock of deep anaesthesia and intrauterine manipulation. Hence each case must be judged individually on its merits. In doubtful cases a vaginal examination under anaesthesia may be made in the operation theatre to assess the possibility of vaginal delivery. According to Chassar Moir, more than one case in three of uterine rupture is caused by internal version performed late in labour, usually for impacted shoulder. The uterus should always be explored after a vaginal manipulations in a case of shoulder presentation no matter how easily version was performed.

The resort to caesarean section in our series was very low, in only 19.2% of the cases as the first line of treatment with specific indications. Mahale (1963) has made a plea for liberal use of caesarean section in order to improve foetal salvage. Hall & O'Brien (1961) give an incidence of 90% caesarean section in transverse lie. We feel that internal version and breech extraction in uncomplicated cases can give equally good results if well managed by experienced obstetricians. We are not in favour of too frequent resort to caesarean section and should be done for specific indications.

The maternal mortality was 3.8% in our series and in all the cases the death was due to shock in ruptured uterus. No maternal death was seen either after caesarean section or after internal version.

The overall foetal wastage was 67.3% and corrected foetal wastage 8.1%.

Summary

1. A review of 104 consecutive cases of transverse lie and shoulder presentation is presented from 1968-70.
2. One case who came in early labour, external cephalic version was done and later the patient delivered normally.
3. Management of these cases is discussed and internal podalic version was the main line of treatment.
4. There were 6 cases of ruptured uterus.
5. The maternal mortality was 3.8%. Most of the cases recovered without any complications.
6. The overall foetal wastage was 67.3% and the correct foetal wastage 8.1%.

References

1. Chakravarty, B.: J. Obst. & Gynec. India. **14**: 752, 1964.
2. Dalal, N.: J. Obst. & Gynec. India. **20**: 352, 1970.
3. Garber, E. C. Jr. and Ware, H. H. Jr.: Am. J. Obst. & Gynec. **61**: 62, 1951.
4. Hall, S. Cand O'Brien, F. B.: Am. J. Obst. & Gynec. **82**: 1180, 1961.
5. Mahale, R. S.: J. Obst. & Gynec. India. **13**: 205, 1963.
6. Moir, C.: Munro Kerr's Operative Obstetrics ed. **7**: 1964 Baillire, Tindall & Cox.
7. Parikh, K. S. and Parikh, S. R.: J. Obst. & Gynec. India. **14**: 858, 1964.
8. Webster, A. and Geittmann, W. F.: Am. J. Obst. & Gynec. **27**: 34, 1956.
9. Winkler, E. G. and Congello, V. W.: Am. J. Obst. & Gynec. **79**: 1096, 1960.
10. Vaish, R.: J. Obst. & Gynec. India. **12**: 707, 1962.