

## OBSTRUCTED LABOUR — A STUDY OF 742 CASES

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### SUMMARY

Obstructed labour with its dreadful consequences and serious implications on mother and foetus neonate needs continuing appraisal. This retrospective study was conducted on antecedents and sequelae of obstructed labour cases with emphasis on patient characteristics, clinical presentation, labour-delivery course and method of management in relation to maternal-perinatal outcome. During the period of study (1984-1988, July) there were total 36,921 deliveries and 742 cases of obstructed labour (Incidence - 2.01%). Analysis revealed preponderance of patients of 20 - 25 years age group (49.3%), rural-semi urban areas (66.4%) and lower socio-economic status (58.8%). 38% cases were referred from district or rural hospitals. 61.9% were admitted with ruptured membrane and 9.9% with hand prolapse. Cephalo-pelvic disproportion was commonest (69.7%) aetiological association and malpresentation-position was next frequent (28.6%). Incidence of rupture uterus was 9.3% needing hysterectomy in 95.7% of those cases. Delivery by abdominal and vaginal route were 84.5% and 15.5% respectively.

The incidence of caesarean-section was 75.6% and destructive operation 13.1%. 16.8% of cases with oblique lie were managed by caesarean section while 60.2% needed destructive operation, Evisceration was the most frequent type of destructive operation (71.1%) performed. Maternal morbidity was greater in caesarean section than vaginal deliveries (76.2% - Vs. - 46%). Perinatal deaths were 21.7% and there were 3 maternal deaths. Three cases of vesico-vaginal fistula and one case of obstetric palsy occurred. Proper antenatal and intranatal assessment can obviate this complication.

### Introduction

Obstructed labour is a hazardous clinical problem met with in obstetric

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practice. In a developing country like India with 24.8% females formally educated, 48.4% living at poverty level, 80% living in rural areas and 70% women being delivered at home (Dawn, 1986) it is not unusual to record 2-5% incidence of obstructed

labour in referral hospitals (Meenakshi, 1970; Dutta and Pal, 1978).

The cases of obstructed labour are usually unbooked, brought late in labour with ruptured membrane, infected and in a state of exhaustion. A fair number of those report with rupture of uterus or on the verge of rupture being attended by unskilled birth attendants (Rao, 1982). There is risk on increased post-partum haemorrhage, septic shock, peritonitis and damage to surrounding pelvic structures. As a sequelae about 3.5% developed urinary fistulae and 5% obstetric palsy while prolonged amenorrhoea is also known to occur following obstructed labour (Rao, 1982), jeopardising the future obstetric career.

All the undesirable circumstances led to by the occurrence of obstructed labour and magnitude of maternal and perinatal complications created the necessary stimulus for the present study of obstructed labour with its antecedents and sequelae.

#### Materials and methods

During a period of 4 years 7 months (1984-1988, July) 742 cases of obstructed labour were recorded out of total 36,921 deliveries at the 380 bedded Obstetric and Gynaecological unit of N.R.S. Medical College & Hospital, Calcutta. Each case record was analysed in details with particular emphasis on patient characteristics. Critical analysis was made of antenatal care, condition on admission, course and outcome of labour and delivery, management and aetiological association and maternal and perinatal outcome.

#### Observations

**Incidence:** Table-I shows the year-wise distribution of cases with obstructed labour. The overall incidence was 2.01%.

**Patient-profile:** Majority were of 20-25 year age group. Primigravida constituted 45.99% and parity 1-4 constituted majority (51.5%). Majority were from rural-semiurban areas (66.4%) and of lower socio-economic status (58.8%). 1.2% of the cases were unwed mothers.

TABLE-I  
YEAR-WISE DISTRIBUTION

| Year             | Nos. of deliveries | Obstructed labour cases |      |
|------------------|--------------------|-------------------------|------|
|                  |                    | Nos.                    | %    |
| 1984             | 7339               | 147                     | 2.00 |
| 1985             | 7845               | 166                     | 2.11 |
| 1986             | 8579               | 171                     | 1.99 |
| 1987             | 8700               | 194                     | 2.23 |
| 1988             | 4458               | 64                      | 1.43 |
| (till 31st July) |                    |                         |      |
| Total            | 39,921             | 742                     | 2.01 |

Clinical presentation on admission: 64.9% cases were unbooked, 38% were referred from neighbouring district - subdivision or rural hospitals, 33% were in low general condition, 61.9% came with ruptured membrane and 9.9% had neglected shoulder presentation. The incidence of post-caesarean pregnancy with obstructed labour was 3.8%.

Aetiological association of obstructed labour cases is shown in Table-II.

TABLE II

| Aetiological association     | Obstructed labour cases |       |
|------------------------------|-------------------------|-------|
|                              | Nos.                    | (%)   |
| Cephalo-pelvic disproportion | 517                     | 69.7  |
| Malpresentation              | 169                     | 22.8  |
| Malposition                  | 43                      | 5.8   |
| Uterine deformity            | 3                       | 0.4   |
| Cervical deformity           | 2                       | 0.3   |
| Foetal deformity             | 4                       | 0.5   |
| Tumour obstruction           | 4                       | 0.5   |
| Total                        | 742                     | 100.0 |

**Labour and delivery:** Duration of labour was prolonged by 18 hours or more in 64.5% cases; in the rest assessment could not be done due to improper recording. Incidence of rupture of uterus with its aetiological association and mode of management is shown in Table III. Vertex presented in 530 cases Oblique lie (113 Nos.) was the commonest malpresentation in the series (Table-IV).

Rupture uterus was diagnosed in 88.4% prior to laparotomy, in 8.7% were during laparotomy and in 2.9% on routine lower segment exploration following vaginal delivery.

**Management:** Mode of management of obstructed labour cases in different presentation and position of foetus is detailed in table IV.

**Complications:** Maternal morbidity in the series is detailed in Table V.

**Perinatal outcome:** Incidence of perinatal death was 21.7% (Table VI). 71.3% of stillbirths were of male sex and 32.8% babies weighed more than 3.5 kg at birth.

**Maternal death:** There were 3 cases of maternal deaths of which 2 were following rupture uterus and 1 followed caesarean section.

TABLE III

| Aetiological association | Rupture of uterus |               | Management             | Rupture uterus |               |
|--------------------------|-------------------|---------------|------------------------|----------------|---------------|
|                          | Nos.              | (%)           |                        | Nos.           | (%)           |
| C.P.D.                   | 41                | 59.42         | Hysterectomy           | 64             | 92.8          |
| Malpresentation          | 26                | 37.68         | Caesarean hysterectomy | 2              | 2.9           |
| Malposition              | 1                 | 1.45          | C.S. with repair       |                |               |
| Foetal malformation      | 1                 | 1.45          | of rent                | 3              | 4.3           |
| <b>Total</b>             | <b>69</b>         | <b>100.00</b> |                        | <b>69</b>      | <b>100.00</b> |

TABLE IV

| Mode of Management  |            | Presentation and Position |           |            |             |          |          |
|---------------------|------------|---------------------------|-----------|------------|-------------|----------|----------|
|                     |            | Vertex                    | O. P.     | Oblique    | Face & Brow | Breech   | Compound |
| Caesarean section   | 561        | 465(87.7%)                | 31(72.1%) | 19(16.8%)  | 39(84.7%)   | 5(62.5%) | 2        |
| Hysterectomy        | 66         | 39(7.3%)                  | 1(2.3%)   | 25(22.1%)  | 1(2.2%)     | -        | -        |
|                     | 627        |                           |           |            |             |          |          |
| Destructive Opn.    | 97         | 21(4.0%)                  | 2(4.6%)   | 68(60.2%)  | 5(10.9%)    | 1(12.5%) | -        |
| Forceps delivery    | 14         | 4(0.8%)                   | 9 (21.0%) | -          | 1(2.2%)     | -        | -        |
| Int.podalic version | 1          | -                         | -         | 1(0.9%)    | -           | -        | -        |
| Breech extraction   | 2          | -                         | -         | -          | -           | 2(25.0%) | -        |
| Duhrssen's incision | 1          | 1(0.2%)                   | -         | -          | -           | -        | -        |
|                     | 115        |                           |           |            |             |          |          |
| <b>Total :</b>      | <b>742</b> | <b>530</b>                | <b>43</b> | <b>113</b> | <b>46</b>   | <b>8</b> | <b>2</b> |

TABLE V

| Type of complications    | Nature of Delivery |                   |               |
|--------------------------|--------------------|-------------------|---------------|
|                          | C. S. (561)        | Hysterectomy (66) | Vaginal (115) |
| Post-partum haemorrhage  | 95(16.9%)          | -                 | 26(22.6%)     |
| Extension of incision    | 88(15.7%)          | -                 | -             |
| Broad ligament haematoma | 11(1.9%)           | 6 (9.1%)          | -             |
| Injury Viscus            | 5 (0.9%)           | 3 (4.5%)          | -             |
| Post-operative shock     | 86 (15.3%)         | 11(16.7%)         | 2 (1.7%)      |
| Peritonitis              | 22(3.9%)           | 10 (15.1%)        | -             |
| Wound sepsis             | 121 (21.6%)        | 25 (37.9%)        | 21 (18.3%)    |
| Complete perineal tear   | -                  | -                 | 2 (1.7%)      |
| Cervical tear            | -                  | -                 | 2 (1.7%)      |
| Total :                  | 428 (76.2%)        | 55 (83.3%)        | 53 (46.0%)    |

TABLE VI  
DISTRIBUTION OF PERINATAL DEATHS

| Mode of Management    | Still-birth |       | Neonatal death |       |
|-----------------------|-------------|-------|----------------|-------|
|                       | Nos.        | (%)   | Nos.           | (%)   |
| Hysterectomy          | 30          | 22.1  | 2              | 8.0   |
| Caesarean section     | 6           | 4.4   | 22             | 88.0  |
| Destructive operation | 97          | 71.3  | -              | -     |
| Forceps delivery      | 2           | 1.5   | -              | -     |
| Int. podalic version  | 1           | 0.7   | -              | -     |
| Breech extraction     | -           | -     | 1              | 4.0   |
| Total :               | 136         | 100.0 | 25             | 100.0 |

*Sequelae:* 3 cases of V.V.F. were recorded of which 2 followed abdominal delivery. One case of obstetric palsy following hysterectomy was detected.

### Discussion

In spite of increased awareness of implementation of community health care delivery system the case of obstructed labour, though undesirable, occur in fair number in our country. Screening of high risk pregnancy cases is hampered by multiple factors including poor socio-economic condition, poor communication facilities, meagre scientific facilities in deservicing centres and lack of orientation

and education of lay people and health workers. Though there were pre-ponderance of cases from rural areas, of lower socio-economic status and of unbooked admissions peculiarly enough 33.6% cases were from urban areas, 7.7% with high socio-economic status and 35.1% were booked admissions. This signifies that all the mothers were exposed to similar adverse condition. High incidence of C.P.D. (69.7%), of undiagnosed malpresentation (22.8%), of C.S. (75.6%), of destructive operation (13.1%) of rupture uterus (9.3%) and of neglected shoulder presentation (9.9%) highlights the gravity of the situ-

ation. The practice of modern obstetrics in developed countries, does not justify destructive operations on a living child and in 1949, Stabler advocated that caesarean section is safer than destructive operations in neglected cases even with dead foetus. The maternal and perinatal outcome of this study justified the inference drawn by Jhirad (1954) and Gogoi (1971) in preferring destructive operations in neglected and late cases. The incidence of maternal morbidity were more in C.S.(76.2%) than in vaginal deliveries (46.0%) in the series. In adequate infrastructure for supervision of post-caesarean pregnancy with its dreadful consequences also modifies the choice of method of management. Routine exploration of lower uterine segment following manipulated vaginal delivery is mandatory (2.9% of rupture uterus cases were diagnosed in the series thereby). Manipulative vaginal deliveries by experienced hand saved life in the past and it can be concluded that the

practice and teaching of destructive operations will continue to do so. Ideally, the management of obstructed labour should begin before labour is obstructed.

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