

# A Clinical Study of 100 Cases of Obstructed Labour and Its Fetomaternal Outcome

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## Abstract

Prevention is the foundation stone of safe and successful obstetrics. Many factors responsible for disastrous outcome of obstructed labour can be nullified to a large extent by sustained and planned effort, improvement of socio economic condition and educational standard, awareness of antenatal and internal care, availability of medical facilities in remote areas and health education with advice of family welfare can minimize the unfortunate outcome of OL. We studied 100 cases of obstructed labour and its fetomaternal outcome.

**Key words:** Cephalo-Pelvic Disproportion, Labour, Pelvis

## 1. Introduction

Inability of foetus passing through the birth canal despite of uterine contractions is considered as obstructed labour (OL) (Gessesew and Mesfin., 2003). It is a major Cause of maternal and perinatal morbidity in developing countries (Gupta and Porwal., 2012). There are five major causes of maternal death: postpartum hemorrhage, infection, OL, hypertensive disorders and unsafe abortion (Khan et al., 2006). Premature death is not only the consequence of neglected OL, obstetric fistula (rectovaginal or vesicovaginal ) is also a major consequence of OL (Dolea and Zahr., 2003).

## 2. Material and methods

Present study was carried out on 100 patients of OL admitted in labour room of a teaching hospital. All cases of OL were studied in relation to age, parity, antenatal check-up, causes of OL, obstetrical management of OL and mode of parturition. Detailed history, general and obstetrical examinations were done. All cases were followed up till their stay in the hospital.

## 3. Results

Present observations revealed that majority were received as emergency cases (80%) with no previous antenatal check-up. Incidence was remarkably low (20%) in patients who had antenatal check-up. The age distribution of cases with OL showed that majority (46%) of patients belongs to younger age group between 21-25 years (Table: 1). 86% cases with OL admitted belong to rural areas.

Table 1. Age distribution of cases with OL

Age group (in years)	No. of cases	Percentage
Up to 20	19	19
21-25	46	46
26-30	25	25
Above 31	10	10

It was observed that the incidence of OL was the maximum in primigravida (Table: 2).

Table 2. Relation of parity with cases of OL

Parity	No. of cases	Percentage
0-1	63	63
2	14	14
3	8	8
4	8	8
5 and above	7	7

Major etiological factor of obstructed labour in the present study was cephalopelvic disproportion (60%) and malpresentation (37%) (Table: 3).

Table 3.

Causes of OL	No. of cases	%
Pelvic contraction and disproportion	60	60
Malpresentaion and malposition	37	37
Shoulder	20	20
Deep transverse arrest	6	6
Brow	1	1
Face (Men to-posterior)	1	1
Impacted breech	9	9
Misuse of oxytocin	1	1
Hydrocephalus	0	0
Cervical Dystocia	1	1
Fetal ascites	0	0
Pelvic tumors	1	1
Twin	0	0

Incidence of cephalo-pelvic disproportion was greater in primi-gravida where as multi-gravida cases were observed with higher incidence of malpresentation (Figure: 1).

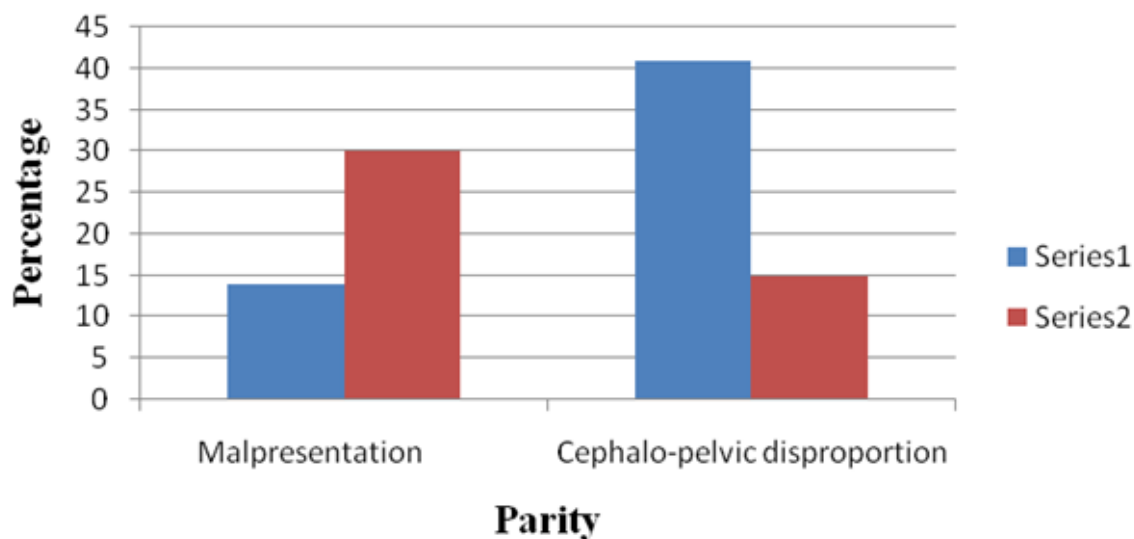


Figure 1. Parity wise distribution of malpresentation and contracted pelvis.

Most common form of management was lower segment caesarean section (LSCS) performed in 82 out of 100 cases (Table: 4).

Table 4. Obstetrical management of OL

Mode of delivery	%
LSCS	82
Forceps delivery	7
Laparotomy	6
Caesarean hysterectomy	5
Repair of Rent	1
Internal inversion	0
Craniotomy	3
Evisceration	2

This surgery was commonly performed in 21-25 year of age group.

It is also noted that the incidence of lower segment caesarean section was high in primi-gravid (53%) in whom pelvic contraction seems to be a major factor in promoting obstruction during labour. Destructive operation and forceps delivery were also most common in primi-gravida whereas caesarean hysterectomy performed more in multi-gravida (Table:5 ).

Table 5. Mode of delivery in relation to the parity of patients

Parity	LSCS %	Destructive operation %	Caesarean %	Forceps delivery %	Internal version %
0-1	53	2	0	5	0
2-4	23	2	3	2	0
5 and above	8	1	2	0	0

#### 4. Discussion

Obstructed labour is still a burning problem in developing countries. Despite large expansion of medical services in India, the decline in OL has not been yet materialized so far. The management is a challenge for obstetrician due to wide range of complications. Even when the immediate problems like shock and rupture uterus have been dealt successfully, it leaves a tail behind in various forms. High mortality, perinatal mortality and morbidity, the ugliest urinary fistula which remains a constant reminder of the turbulent days labour in the past.

#### Incidence of OL

Results of clinical study based on 100 cases of OL admitted to department of obstetrics and gynaecology are observed herewith. The high incidence of OL in present study was due to poor antenatal care, unawareness of risks of labour, lack of communication and low socioeconomic condition of the patients. Present study showed 20% cases were referred to emergency having no antenatal check up.

### **Relationship between OL and age**

Bhaskar Rao K (1980) reported maximum cases of OL in the age group of 21-23 years. Sarkar and Paul (1990) observed majority of cases of OL in 18-21 years of age group. Gupta et al (1991) found that 72.8% of such cases to occur in age group of 20-23 years. This is due to custom of early marriage (14-16 years) among uneducated people living in rural area and high fertility in this young age group which is responsible for maximum confinement to occur at relatively younger age group and may explain the high incidence of OL in these age groups.

### **Rural urban distribution**

Present study showed 86% patients belong to rural areas. Sarkar and Paul observed 80% cases of OL belonging to rural areas. Gupta et al found 83% cases from rural areas in their study. There were very few primary health centres in the rural areas and deliveries were conducted by unskilled birth attendants. Misuse of oxytocin led to OL. Poor or insufficient health education was a major causative factor of OL.

### **Parity incidence**

Table 2 shows that 63% cases of OL were primigravida followed by 30% in multipara and 7% in grand multipara. Sarkar and Paul<sup>6</sup> reported that primigravida constituted 45.99% cases of OL. Gupta et al<sup>7</sup> also observed that maximum cases in primigravida (67.15%). Although the predominance of OL was found in primigravida in this study, the number of multipara was also high. Short stature and minor variant of contracted pelvis are still prevalent amongst ill nourished rural primigravida in our country. A greater number of involvements of multipara are explained by the facts that the secondary contracted pelvis is frequently found due to malnutrition coupled with prolonged lactation, larger size of babies in subsequent pregnancies and decreased abdominal and pelvic muscular tone causing abnormal fetopelvis axis resulting malpresentation (Hopewood., 1982).

### **Etiological association of OL**

Major etiological factors of OL in this study were cephalo-pelvic disproportion (60%) followed by malpresentation (37%) and misuse of oxytocin (1%). Previous studies have also shown that cephalo-pelvic disproportion was the commonest cause of obstruction and was mostly detected in primigravida although it affected the multi gravida in a significant manner (Table-6).

Author (s)	Cephalo pelvic disproportion %	Malpresentation %
Sarkar and Paul (1990)	69.7	22.8
Gupta et al (1991)	50	38.5
Randhawa et al (1991)	68	23
Kamla Jayaram (1993)	72.3	24
Chhabra et al	41.15	53.2
Present study	57.33	36

Bigger size of neonates may also predispose to cephalo-pelvic disproportion in multigravida (Rohtagi et al., 1977).

Malpresentation was the second most common cause of OL and was principally confined to multigravida. Laxity of abdominal muscles, obesity and lordosis may lead pendulous abdomen and contribute to malpresentation, malposition and ineffective bearing down effort during second stage of labour (Wendy et al., 2012). Deep transverse arrest and shoulder presentation were the main offenders causing obstruction, the less common malpresentation were face i.e. men to posterior (1 case), brow (1 case), impacted breech (9 cases) in present study.

### **Analysis of the management of various forms of OL**

In the present study, lower caesarean was the most common form of management done in 82 cases out of 100 (Table: 4). Caesarean rate of the present series was almost similar to the study of rohtagi et al who reported a caesarean rate of 74%. Dutta and pal (1978) however reported a very low caesarean section (19%). Present study showed very low incidence of destructive operation (1.33%) which is similar to the study of rohtagi et al (1.5%). In contrary, dutta and pal performed destructive operation in 51.8% cases. In the present series, the management was done depending upon the age, parity, general condition of the patient, the state of the uterus and presence or absence of foetal heart sounds.

Sahu and sinha (1990) emphasised the need for adopting measures specifically to economy and scientific development of the countries. In the country like India where most of the patients neglect the importance of follow up or antenatal care in subsequent pregnancies may endanger their life.

In this study most cases were emergency admissions coming from villages and from rural health centres. Considerable number of cases presented history of outside interference and were referred as a last resort when all methods of delivering them had failed outside. Management of shock, correction of dehydration, ketosis and provision of adequate antibiotics care were measures in all cases.

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