

Even in 21st Century Still Obstructed Labor Remains Life Threatening Condition

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Abstract

Background and Objectives: Obstructed labor is a life threatening complication of pregnancy, almost disappeared from the western world, but is still one of

leading cause of maternal morbidity and mortality in developing countries. This study was conducted to assess the frequency of complications in obstructed labour (OL) and outcomes of such patients with obstructed labour and give recommendations for remedial measures.

Setting and Design: This descriptive study was conducted on 40 patients having OL, in the Department of Obstetrics and Gynecology at Muhammad Medical College Hospital (MMCH) Mirpurkhas, from 1st July 2007 to 30th June 2010.

Methods: Patients coming through the main emergency to labour room (LR) or already admitted in LR with a history of labor pains more 12 hours were included in this study. Patients with previous caesarean section and myomectomy were excluded from. Written consent was taken from patients for using information regarding history, clinical examination and related investigations. The data was analyzed in SPSS 10.

Result: Mean age was 27.7 ± 5.9 , while majority belonging to age group of 20 – 30 years, mostly found in primigravidae; the mean duration of labour was 15.9 ± 11.6 hours. Cephalopelvic disproportion (CPD) was the most common risk factor found in 27 (67.5%) cases. Caesarean section was the most common mode of delivery 29 (72.5%) cases. Eight (6.8%) patients had rupture uterus. Only one (2.5%) patient was primigravida with incomplete uterine rupture in obstructed labour with brow presentation. Still birth rate was very high 18 (45%) and neonatal deaths were 14 (35%), while 8 (20%) babies survived. Four (10%) patients

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died due to complications of obstructed labour.

Conclusion: CPD was the predominant cause of OL, more in young age group. Morbidity and mortality were more common in patients with duration of labor pains more than 18 hours. Further studies should be conducted for prevention, recognition and timely management of risk factors to reduce the fatal outcomes.

Key Words: Obstructed labour, Cephalopelvic disproportion, Rupture uterus.

Introduction

Obstructed labour is a disorder of feto – pelvic relationships characterized by failure to progress despite of strong uterine contractions. OL affects 3 – 6% of laboring women globally and is a major cause of both maternal and new born morbidity and mortality.¹

Obstructed labour remains an important cause of not only maternal death but also long and short term disability. Prolonged obstructed labour may produce injuries to multiple organ systems. The best known, and most common of these injuries is obstetrics fistula formation. In addition to their physical injuries, women who experienced prolonged obstructed labour often develop serious social problems including divorce, exclusion from religious activities, and separation from their families, worsening poverty, malnutrition, and almost unendurable suffering.² OL has particular impact in communities in which mechanical problems during labour are common and availability of functioning relevant health services is sparse. Obstructed labour comprises one of the five major causes of maternal mortality and morbidity in developing countries.³ The current WHO initiative⁴ is to reduce maternal mortality to 75% of the 1990 level by 2015. If this is to be successful, the problem of obstructed labour will need to be addressed effectively. Our aim of this study to assess the frequency of complications in obstructed labour an outcome of such patients. The data generated will help to improve maternal and fetal morbidity and mortality by planning prompt management for future cases of obstructed labour and its complications.

Methodology

This descriptive three year study was done on 40 diagnosed patients of obstructed labour conducted in the Department of Obstetrics and Gynecology from July 2007 to 30th June 2009 at Muhammad Medical College

Hospital Mirpurkhas, Sindh, Pakistan. Patients with previous Caesarean section and myomectomy were excluded from this study. On following criteria patient was labeled as the case of OL.

When Labour lasting more than 12 hours despite of adequate uterine contractions and associated with one of the sign given below.

- Hypertonic uterine contractions.
- Bandle's ring.
- Uterine rupture.
- Blood stained urine.
- Capt or mounding.
- Edematous external genitalia.
- Clinical signs of shock (systolic blood pressure < 90 mmHg and pulse > 110 / min⁵

On admission all the patients were managed to the departmental protocol of managing prolonged obstructed labour by resident medical officer in emergency room, maintain intravenous fluid, antibiotic, correction of electrolyte imbalance, correction of anemia if present. Caesarean section or instrumental delivery and laprotomy in case of rupture uterus was performed by consultant,⁶ and urethral catheterization for 10 to 21 days as prophylaxis against genital fistula.⁷ Follow up visits were advised initially after one week than according to the condition of the patients to see the long term complications of obstructed labour.

Results

A total 40 patients with obstructed labour were studied during study period. The majority of patients; 35 (87.5%) came from rural areas after traditional trial of labour by dais, and local doctors, only 3 (7.5%) patients had received antenatal care at least once. Obstructed labour was more commonly seen in primigravidae; 25 (62.5%). CPD was found in 27 (67.5%) cases, followed by fetal mal – position and presentation in 13 (32.5%) cases. The mean age at presentation was 27.7 ± 5 years. All the patients were admitted through the emergency room and most of them 33 (82.5%) had history of labour for 12 – 24 hours. The mean duration of labour was 15.9 ± 11.6 hours (Table 1). Caesarean section was done as the commonest mode of delivery in 29 (72.5%) followed by instrumental delivery and laprotomy for rupture uterus 5 (12.5%) and 6 (15%) respectively. Many patients had more than one complication that was observed during preoperative, operative, postoperative and at follow-up visit (Table: 2, 3 and 4). The most common complication was anemia

followed by UTI and Postpartum hemorrhage. Perinatal mortality was alarmingly high 32 (%), Still birth rate was 18 (45%) and neonatal deaths were 14 (35%), while 8 (20%) babies were survived after resuscitation. Four (10%) patients were died due to complications of obstructed labour.

Table 1: Duration of labour in women with obstructed labour (n = 40).

Duration	No. of Patients (%)
Up to 12 hours	07 (17.5)
12 – 18 hours	23 (57.5)
18 – 24 hours	05 (12.5)
> 24 hours	05 (12.5)

Table 2: Preoperative complications in obstructed labour patients (n = 40).

Preoperative Complications	No. of Patients (%)
Anemia	40 (100)
Ruptured Uterus	06 (15.0)
Ante partum Hemorrhage	06 (15.0)
Maternal death	01 (2.5)

Table 3: Operative complications in obstructed labour patients (n = 40).

Operative Complications	No. of Patients (%)
Hemorrhage	29 (72.5)
Incomplete Uterine Rupture	02 (5.0)
Extension of uterine incision	21 (52.5)
Hysterectomy	08 (20.0)
Ruptured bladder	02 (5.0)

Discussion

Obstructed labour is a life threatening complication of pregnancy, almost disappeared from the western world, but is still one of leading cause of maternal morbidity and mortality in developing countries.⁸ Regarding risk factors many authors are agreed that CPD is the most commonly found risk factor in primigravidae

Table 4: Postoperative complications in obstructed labour patients (n = 40).

Postoperative Complications	No. of Patients (%)
Anemia	40 (100)
Postpartum hemorrhage	15 (37.5)
Wound infection	27 (67.5)
Wound dehiscence	03 (7.5)
Puerperal pyrexia	15 (37.5)
Puerperal sepsis	05 (12.5)
Maternal death	03 (7.5)
UTI	35 (87.5)
Secondary amenorrhea	08 (20.0)
Secondary infertility	10 (25.0)
VVF	03 (7.5)
Stress incontinence	02 (5.0)

followed by malposition and presentation in grand-multipara as well.^{8,9} Major complications of OL in this study, most of which were due to late arrival at the hospital, are anemia, postpartum hemorrhage, rupture uterus and urinary bladder, wound infection, puerperal pyrexia and sepsis, vesicovaginal fistula (VVF) also found in other studies as well.^{10,11} Meyer et al. found a prevalence of stress incontinence after spontaneous and instrumental delivery of 21% and 34% respectively.¹² In our study we found stress incontinence in 2(5%) patients who delivered vaginally with outlet forceps. All 40 (100%) patients had develops anemia at admission due to different risk factors in different patients such as malnutrition, rupture uterus, excessive bleeding during caesarean section or after instrumental delivery and due PPH. Urinary tract infection due catheter for prophylaxis of VVF⁶ is second most common. By for the most severe and distressing long term condition is obstetrics fistulae, in our study we found VVF and rectovaginal fistulae 3 (7.5%) mostly in primigravidae; while VVF was observed in one (2.3%) patient was found in 43 patients of obstructed labour at liaquat medical university.¹¹ Hilton et al reported 715 cases of fistula in a hospital in Nigeria between 1990 – 1994, 92.2% of which were of obstetric origin, and 80.3% following neglected obstructed labour.¹³ Urinary bladder was also found rupture in our 2(%)cases of obstructed labour along with uterine rupture,¹¹ same finding was observed by begum TJ,¹⁴ in rupture of gra-

vid uterus. Obstructed labour is the leading cause of uterine rupture worldwide. It is very rare in primigravid labours. But in this study one primigravida was found with incomplete uterine rupture. A recent 7 year review carried out in Ghana found that rupture was due to prolonged labour in around one third of all cases,¹⁵ in our study we found uterine rupture in 8 (20%) cases of obstructed labour. When we compare it with other Pakistani study that is two times higher than our study i.e. 36 / 85, 42.3%,¹⁶ this high incidence is due scarred uterus and in our study we only include unscarred uteri. Postpartum hemorrhage was seen in 15 (37.5%) cases that is found higher in our study in comparison to other studies.^{11,17} Regarding long term complication secondary amenorrhea and infertility in patients who underwent hysterectomy due to rupture uterus and PPH and tubal ligation was also observed by many authors in their studies.^{13,18} Loss of fertility in our country^{14,16} and even in other countries like Yemen¹⁵ is a catastrophic.

Prognosis is a lot better for mother as compared to the fetus.¹³ Perinatal mortality was alarmingly high mostly due to asphyxia was observed in many studies^{7,11} as well as in this study i.e. 32 (80%), only 8 (20%) babies were survived after resuscitation.

However during study period, 4 (10%) maternal deaths were associated with obstructed labour with one brought dead at emergency room due to rupture uterus,¹⁶ while PPH¹⁷ and sepsis⁶ accounted for two and one respectively. Patients were discharged to home after removal of urinary catheter maximum on 21 days after surgery.⁵

Conclusion

Obstructed labour is one of the most common preventable causes of maternal morbidity and mortality in developing countries. From above study we concluded that, recognizing the causes of obstructed labour is important if the complications are to be prevented. Adequate prevention, however, can be achieved only through a multidisciplinary approach aimed in the short term at identifying high-risk cases and in the long term at improving nutrition. Emphasize should be given to discourage early motherhood.

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