

Puerperal Morbidities After Delivery in a Tertiary Care Referral Hospital of Nepal

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ABSTRACT

Introduction: In a developing country like Nepal maternal morbidity in the post partum period is a major healthcare concern. This study aims to analyze the maternal morbidities in women following delivery at Shree Birendra Hospital.

Methods: This is a prospective, observational, hospital based study, carried out at Shree Birendra Hospital from 13th August 2012 to 13th Feb 2016. Women who underwent delivery in Shree Birendra Hospital with subsequent morbidities within the study period were included in this study. The variables considered in this study were pattern of postpartum morbidities, age, parity, mode of delivery and average duration of hospital stay.

Results: During the study period, a total number of 3407 deliveries were conducted in Shree Birendra Army Hospital. Out of these, 54 patients (1.58%) had postpartum morbidities. Puerperal sepsis was the most frequent diagnosis seen in 18 patients (33.3%), followed by surgical wound infection in 14 (25.9%) and secondary postpartum hemorrhage (PPH) in 10 (18.5%).

Conclusion: Puerperal sepsis remains the most common cause of postpartum morbidity.

Keywords: postpartum morbidity; postpartum hemorrhage; puerperal sepsis.

INTRODUCTION

The Puerperium is a special but crucial time for both the mother and the infant as this is the period when women recover from labour and revert back to physically to the non-pregnant state. The WHO defines the postpartum period, or puerperium, as beginning one hour after the delivery of the placenta and continuing till six weeks after the birth of the infant.¹

The challenge for a developing country like Nepal is making motherhood safe. This can be achieved only by proper education, good communication and bringing about social change. Skilled birth attendants and encouraging midwifery practices will

significantly reduce morbidities as well as mortalities.

Information on the extent of postpartum morbidity in developing countries is limited especially in the context of Nepal. This study was thus carried out in Shree Birendra Hospital, which is a tertiary level welfare hospital for army, retired army personnel and their families. Obstetric services in the hospital

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were, however recently started from 13th August 2012. Hence this study has been conducted to find out the burden and pattern of morbidities in postpartum period.

METHODS

This is a prospective, observational, hospital based study, carried out at Shree Birendra Hospital from 13th August 2012 to 13th Feb 2016. A daily record of all obstetric cases admitted in the hospital was made from admission records. All postpartum morbidities among cases delivered at SBH was recorded to estimate the incidence, the cause, the average duration of hospital stay as well to analyze morbidities in relation to age, parity, gestational age and mode of delivery.

For the purpose of this study, the WHO definition of the postpartum period (from delivery until 6 weeks after delivery) was used. Women who underwent deliveries in Shree Birendra Hospital with subsequent morbidities within the study period were included in this study. Patients delivered in other hospitals or other settings and admitted for post partum complications were excluded. Similarly, post partum morbidities due to domestic or road traffic accidents were excluded. Patients admitted in the post partum period for neonatal complications were similarly excluded.

The study focused on the incidence, types of morbidities, average duration of hospital stay and analyzed postpartum morbidities in relation to age, parity and mode of delivery. Data was collected on a structured pro-forma covering the relevant information required for the study. Data was then compiled on a computer on a SPSS (Statistical package for social science) for windows version 16.0 and analyzed.

RESULTS

During the study period, a total number of 3407 deliveries were conducted in Shree Birendra Army hospital. Out of these, 54 patients had postpartum morbidities. Consequently the incidence of postpartum morbidities in this study period was calculated to be 1.58%.

During this period 2361(69.3%) had normal vaginal deliveries, while 1046(30.7%) underwent Cesarean section. Among 2361 patients undergoing vaginal deliveries, 38 (1.61%) had postpartum morbidities, whereas out of 1046 Cesarean section deliveries, 16 (1.53%) patients were admitted with postpartum morbidities. The incidence of postpartum morbidities in this study, in vaginal deliveries was 1.61% and in Cesarean section it was 1.53%.

The distribution of age, parity and period of gestation in the patients with postpartum morbidities were similar in both the groups. (Table 1)

Puerperal sepsis was the most frequent diagnosis seen in 18 patients (33.3%), followed by surgical wound infection in 14 (25.9%), secondary PPH 10 (18.5%). UTI, hypertensive

Table 1: Distribution of respondents according to socio-demographic Characteristics (n=121).

	Cesarean section (n=16)	Normal deliveries (n=38)
Age (mean)	26.7 yrs	25.6 yrs
Parity (median)	1	1
Period of Gestation (median)	39-40wks	39-40wks

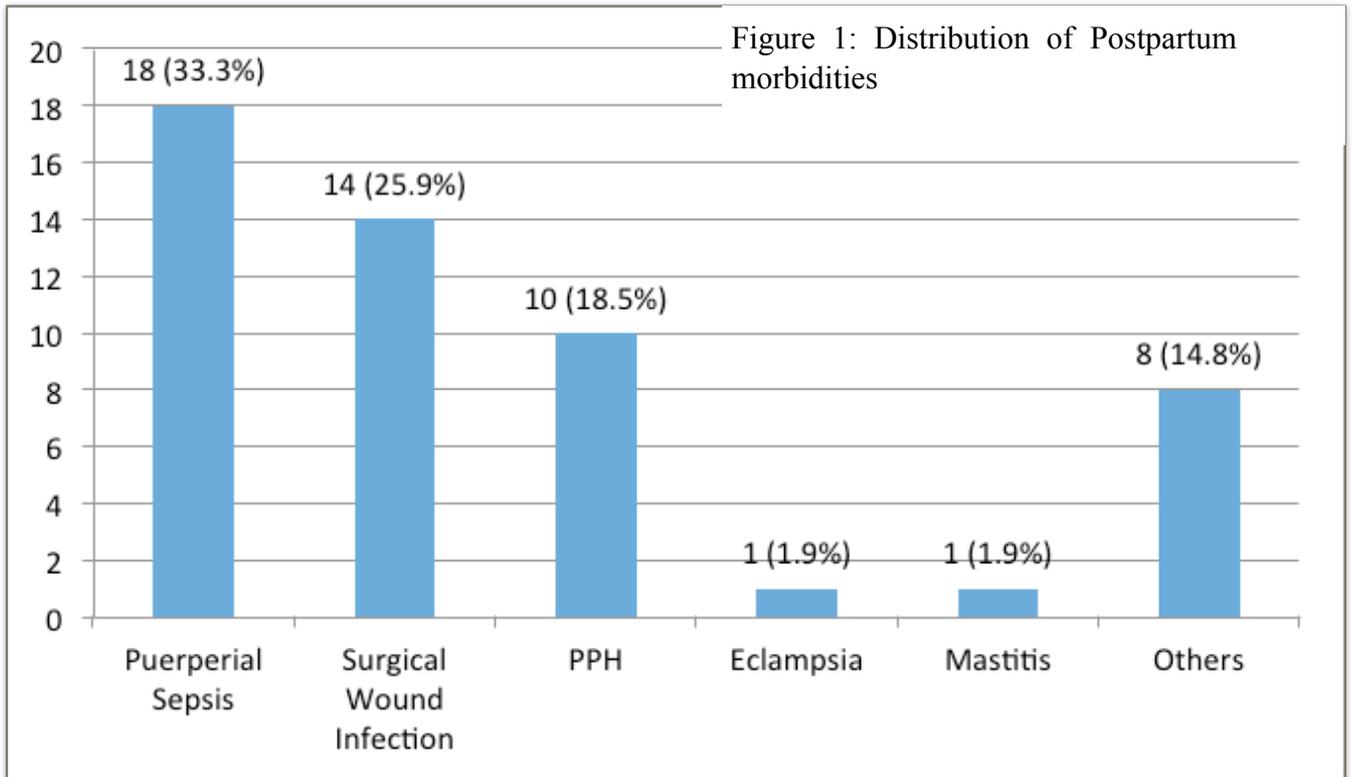


Table 2: postpartum morbidities in C-section and vaginal delivery group

	Cesarean Section n=16	Vaginal delivery n=38
Puerperal Sepsis	4	14
Surgical Wound infection	10	2
Hypertensive disorders of pregnancy	1	0
PPH	0	10
Urinary Tract Infection	1	0
Mastitis	0	2
Others	0	8

disorders of pregnancy, infective hepatitis and postpartum cardiomyopathies were other diagnosis. (Figure 1).

Out of 54 patients who had post partum complications, 38 patients had undergone vaginal delivery and 16 women had undergone caesarean section. Puerperal sepsis was the leading cause of morbidity in vaginal delivery

group while surgical wound infection in cesarean group. (Table 2).

The average duration of hospital stay in vaginal delivery morbidities was 5.6 days whereas in C-section it was 8.7 days.

DISCUSSION

The national essential maternal and neonatal health care service package for Nepal recommends three postnatal visits for all women, whether delivered at home or in other facilities. ² The aim of these visits were to detect life threatening complications like PPH, infection, injuries, severe preeclampsia and newborn complications to ensure proper treatment to reduce maternal and neonatal mortality and morbidity.

In this study the incidence of postpartum morbidity was 1.58 %. Similar incidence of 1.94% was reported from Paropakar Maternity and Women’s Hospital, Thapathali, Nepal in 2007 over a three months period.³ Similar study done in India in 1999 - 2002 reported

2.2% of all obstetric admissions (9080 cases) were due to postpartum complications.⁴ The finding is similar with a study of Lusaka, Zambia where the incidence was 1.7%.⁵

In this study, Puerperal sepsis was the most frequent diagnosis comprising 33.3%, followed by surgical wound infection (25.9%) and secondary PPH (18.5%). A study done in Lusaka, Zambia in 2000, also found that puerperal sepsis was the most common complications (34.8%). Others were malaria (14.5%) and pregnancy induced hypertension (10.9%). In a review of patients having was puerperal sepsis after having delivered in Ife state hospital, Nigeria, in the year 1980-1995, 146(1.7%) among 8428 total deliveries had puerperal sepsis.⁶ The incidence was higher among unbooked cases (71.2%). Hence their study encouraged antenatal care and supervised hospital delivery in order to prevent or reduce the seriousness of postpartum morbidity. In our study, surgical wound infection compromised 25.9% of morbidities indicating a need for more careful infection prevention practices.

In this study, the secondary PPH was found in 18.5%, of which 37.5% women required surgical uterine evacuation and rest of them were treated conservatively. During the course of treatment 18.5% women required blood transfusion. A study done in Patan hospital, Nepal, in Aug 2005-Aug 2006 found the incidence of secondary PPH to be 0.42%.⁷ Majority cause for secondary PPH was retained POC. In this study, the postpartum UTI was found in 1.95 % and similarly hypertensive disorders were detected in 1.9%.

During the study period, out of 54 patients who had postpartum morbidities 38 patients (70.4%) had vaginal deliveries and 16 (29.6%) required caesarean section which is not similar

to the Cohort study conducted in Canada between 1995 and 2001 which showed that caesarean section delivery was associated with significantly increased risk of postpartum morbidities compared to spontaneous vaginal delivery.⁸ C-section was associated with increased risk for uterine infection, surgical wound infection, cardiopulmonary and thrombotic conditions. In a study done in Patan hospital in the year 2006, considering the mode of delivery among all secondary PPH cases, 77% had spontaneous vaginal delivery, 12% cesarean delivery and 7% had vacuum delivery and breech and twin constituted 2% in each.⁵ This study also showed increased number of patients had vaginal delivery with PPH.

In this study, there is a similar distribution in age, parity and period of gestation in both C-section and vaginal deliveries with mean age 25.9 years and having median parity of one. A retrospective study conducted at Nepal Medical College Teaching Hospital, Jorpati in 2004 reported that, among 1619 postpartum admissions 57.9% were between 20-25 years and 17% were teenagers.⁹ The study also showed 88 (5.4%) were primiparous among total postpartum admissions.

In this study the average duration of hospital stay with morbidities in vaginal delivery was 5.6 days as compared to 8.7 days in cesarean section. A population based cohort study done in Canada between 1995 and 2001 showed that, length of hospital stay averaged 3.5 days for C-Section, 2.9 days for forceps and 2.7 days for both vacuum and spontaneous vaginal delivery.⁸

CONCLUSION

It The most frequent morbidity encountered in the women delivered at Shree Birendra Hospital was puerperal sepsis (33.3%),

followed by surgical wound infection (25.9%), secondary PPH (18.5%), UTI, hypertensive disorders of pregnancy, infective hepatitis and postpartum cardiomyopathies.

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