ORIGINAL ARTICLE

Obstetric Hysterectomy and its Associated Maternal Morbidity and Mortality

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ABSTRACT

Aim: To determine the frequency, indications, risk factors, maternal morbidity and mortality associated with emergency obstetric hysterectomy at Ibn-e-Siena Hospital, Multan.
Methods: This is a descriptive study conducted at Ibn-e-Siena Hospital Multan and included all the patients who underwent obstetric hysterectomy from February 2014 to January 2016. Frequency, indications, maternal morbidity & mortality associated with obs hysterectomy are calculated.
Results: Total number of patients delivered during this period is 6038. Out of these 2338 were cesarean deliveries. Frequency of obstetric hysterectomy is 21(0.38%) or 1 in 287 patients. 15 cases were performed after caesarean section, four during laparotomy for ruptured uterus and 2 were done for uterine atony after normal vaginal delivery. Most common indication of obstetric hysterectomy in the present study is morbidly adherent placenta which is seen in 9 patients (42.8%) while 4 patients (19.4%) had placenta praevia without adherence. 4 patients (19.4%) had ruptured uterus, 2 (9.5%) had uterine atony. 2 patients had placental abruption. All patients require blood transfusions. 3 patients (14.2%) had bladder injury, 3 patients (14.2%) had re-exploratory laparotomy. While 6 patients (28.5%) developed septic wound. 2 patients (9.5%) suffered from chest infection while 1 patient (4.7%) developed acute renal failure. 2 patients (9.5%) developed disseminated intravascular coagulopathy.
Conclusion: With the rise in caesarean section rate morbidly adherent placenta is now the leading risk factor for emergency obstetric hysterectomy.
Keywords: Obstetric hysterectomy, maternal morbidity, maternal mortality,

INTRODUCTION

Eduardo Porro of Pavia, Italy performed the first successful caesarean hysterectomy in 1876. For this reason some clinicians still refer to caesarean hysterectomy as “Porro Operation”. Emergency obstetric hysterectomy is operation performed on gravid uterus after delivery or in the puerperium to save the life of patients. Obstetric hysterectomy remains one of the obstetric catastrophes. It is associated with considerable maternal morbidity and mortality and it brings an abrupt and unwelcome end to a woman’s reproductive potential[1].

There is striking difference in the prevalence rate of emergency obstetric hysterectomy worldwide depending upon the obstetric population and available maternity and family planning services. Ruptured uterus is the most common indication of emergency obstetric hysterectomy in Pakistan in different studies[2,3,4]. Abnormal placentation and placenta previa are common conditions leading to obstetric hysterectomy in the developed countries[5,6].

The purpose of this study is to determine the frequency, indications, risk factors, maternal morbidity and mortality associated with emergency obstetric hysterectomy at Ibn-e-Siena Hospital, Multan. Obstetric hysterectomy can save many maternal lives. Timely decision and excellent surgical skills are required.

High morbidity and mortality associated with emergency obstetric hysterectomy has many reasons. Ignorance, poverty, non-availability of health services, early marriages, large family size, lack of antenatal care, poor health of woman are few contributing factors.

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METHODS

This is a descriptive study conducted at Ibn-e-Siena Hospital Multan and included all the patients who underwent obstetric hysterectomy from February 2014 to January 2016. Frequency, indications, risk factors, maternal morbidity and mortality associated with obstetric hysterectomy are calculated.

RESULTS

Total No of deliveries during this time period were 6038. Out of these 2338 were caesarean sections. During the study period total 21 (0.38%) obstetrical hysterectomies were performed. 15 hysterectomies were performed in caesarean section cases, four hysterectomies were done during laparotomy for

ruptured uterus and 2 were done for uterine atony after normal vaginal deliveries. Most common indication for hysterectomy in the present study is morbidly adherent placenta (42.8%) while 4 patients (19.4%) had placenta praevia without adherence.

Table 1: Socio-demographic characteristics of patients (n=21)

Characteristics	n	%age
Age (year)		
20-25	3	14
26-30	6	28.5
31-35	9	42
36-40	3	14
Parity		
Nulliparae	0	0
Multiparae	13	61.9
Grand multiparae	8	38
Gestational age at delivery		
Preterm	7	33.3%
Term	14	66.6%
Booking status		
Booked	7	33.3%
Un-booked	14	66.6%

Table-2:Indications for obstetric hysterectomy (n=21)

Indications	n	% age
Ruptured uterus	4	19.4
Morbidly adherent placenta	9	42.8
Placenta praevia without adherence	4	19.4
Uterine atony	2	9.5
Couvelaire uterus/Placental abruption	2	9.5

Age group: 9 patients (42%) who have done undergone hysterectomy are in the age group 31-35 years. Lowest age group was 23 years and maximum age group was 40 years. Majority of patients 14 (66%) had term pregnancy. While 7 (33%) had preterm pregnancy.

Most common indication for hysterectomy is morbidly adherent placenta (42.8%). 4 patients (19.4%) had placenta previa while ruptured uterus is seen in 4 (19.4%) patients. Uterine atony was indication of hysterectomy is 2 (9.5%) patients while placental abruption is seen in 2 (9.5%) patients.

19(90.5%) patients had total hysterectomy while 2(9.5%) underwent subtotal hysterectomy. All the patients required blood transfusion. 17 (80%) patients require more than 5 pints of blood.

3 patients (14.2%) had urinary bladder injury. Both had previous 4 C-sections. Unilateral oophorectomy was performed in 1 (4.7%) patients due to hemorrhage from the ovary. Re-exploration laparotomy was performed in 3 patients (14.4%) on zero post operative day. Urinary tract infections was seen in 6 patients (28.5%) while 6 patients (28.5%) developed septic wound after hysterectomy, 2 patients (9.5%) suffered from chest infection while 1 (4.7%) developed acute renal failure. Disseminated intravascular coagulation was seen in 2 (9.5%) patients. Maternal mortality was seen in 2 (9.5%) patients.

Table 3: Complications of obstetric hysterectomy (n=21)

Complication	No.	% age
Intraoperative		
Bladder injury	3	14.2
Oophorectomy	1	4.7
Postoperative		
Re-exploration laparotomy	3	14.2
Urinary tract infection	6	28.5
Chest infection	2	9.5
Wound infection	6	28.5
Acute renal failure	1	4.7
Disseminated intravascular coagulation	2	9.5
Maternal death	2	9.5

DISCUSSION

In the present study the frequency of obstetric hysterectomy is 1 in 287 patients or 0.38%. Similar results are seen in Pakistan and India in many studies[2,7,8,9]. Frequency of 0.01% is found in study conducted in India by Pandher DK and Sehgal A[10]. Another study in Nepal showed a small number of obstetric hysterectomy not even one per anum[11].

A higher rate (0.7%) of obstetric hysterectomy is seen in study at Banu by Shaheen et al[12]. Difference in incidence of emergency obstetric hysterectomy may be explained by different level of sophistication in obstetric health care and patient load. In present study 56% of patients were more than 30 years of age and were multipara. These parameters of age and parity are consistent with Okogbmin et al showing them as strong risk factors for obstetric hysterectomy[13]. Another study at Hyderabad showed that majority of patients of obstetric hysterectomy was in age group 26-40 years and were multiparous[14]. Shaikh et al found that majority of patient in their study were in age group 25-29 years[8]. High association with multiparity was also seen by Najam et al[7].

The most common indication of emergency obstetric hysterectomy in this study is morbidity adherent placenta (42.8%). Placenta previa without adherence is seen in 4(19.4%) cases. This shows a changing trend. All the cases of morbidly adherent placenta have previous 3 or previous 4 caesarean sections. Previously uterine rupture and uterine atony were common indications for emergency obstetric hysterectomy in Pakistan. This is in contrast to studies in India where Sahu et al[15], Mukarjee et al[16] and Najam et al[7] reported an incidence of 38%-45% of emergency obstetric hysterectomy due to ruptured

uterus and a very high incidence (75%) of ruptured uterus was reported by Archana et al[17]. Ruptured uterus is the commonest indication for obstetric hysterectomy in different studies in Pakistan and Nigeria[2,3,4,18].

However the indications reported in studies from developed countries abnormal placentation is the primary indication[5,6].

Higher incidence of uterine rupture in these communities indicate widespread ignorance about pregnancy and childbearing, injudicious trial of scar, use of syntocinon in grand multipara by traditional birth attendants and unplanned reproductive pattern giving rise to high parity. In our study 33% of cases of obstetrical hysterectomy were booked where as 66% cases were unbooked.

In the present study 90.5% (n=19) have undergone total hysterectomy while 9.4% (n=2) had subtotal hysterectomy. This is contrast to study in Egypt where 81.7% of patients underwent subtotal hysterectomy[19]. Subtotal hysterectomy is also a common procedure in study conducted in Pakistan[14]. Obstetric hysterectomy is associated with considerable morbidity and mortality.

Mortality in our study is 9.5% (n=2). Which is comparable to other studies in Pakistan[2,3,8]. Both deaths were seen in patients with major degree placenta previa and with morbid adherence. One was unbooked case while other was booked. Both were received in state of shock. An Indian study showed maternal mortality of 2.4%.[10]. In developed countries maternal mortality associated with obstetric hysterectomy is much less[6,20].

High mortality may be due to delay in arrival at hospitals, mishandling by untrained birth attendants and poorly developed health system in developed countries.

Other complications observed in our study are urinary tract injuries in 3 patients (14.2%), oophorectomy was done in 1 patient(4.7%), urinary tract infection was seen in 6 patients(28.5%)while 1 patient (4.7%)suffered from acute renal failure and 2 patients(9.5%) had chest infection. Three patients (14.2%) had re-exploration laparotomy while 6 patients (28.8%) developed septic wound.

All the patients require blood transfusion with 80% patients requiring more than 5 or more blood transfusion. All patients requiring blood transfusions is also seen other studies[10,14].

Newer techniques like intravascular aortic balloon occlusion (IABO) is a valuable ancillary procedure during and scheduled caesarean hysterectomy for placenta percreta as it greatly reduces blood loss. It produces a high degree of pelvic devascularisation.

CONCLUSION

Obstetric hysterectomy is a life saving procedure. Caesarean delivery especially repeat c-section in women with placenta praevia significantly increases the risk of emergency obstetric hysterectomy. Such operations should involve senior obstetricians.

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