EMERGENCY OBSTETRIC HYSTERECTOMY FREQUENCY AND MATERNAL OUTCOME

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ABSTRACT

Objective: To review the frequency, indications and maternal outcome of emergency obstetric hysterectomy.

Study Design: Descriptive study

Place and Duration of Study: In obstetrics and gynecology department of Nawabshah Medical College Hospital Sindh from 2nd May 2005 to 31st April 2008.

Patients and Methods: During the study period total 3089 patients were delivered. Out of these, 37 patients underwent cesarean hysterectomy. Records of all the patients were analyzed. The parameter analyzed were age, parity, social status, booking status, indication for operation, operative notes, maternal outcome, complications and postoperative status. Mortality register was also checked for the causes of maternal deaths.

Results: During the study period, there were 3089 deliveries. Amongst these 37 had emergency obstetric hysterectomies giving rise to a frequency of 11.9 /1000 cases. Regarding parity, 23(62.1%) were multiparous, 12 (32.4%) patients were grand multiparous and 2(5.4%) patients were primiparous. Commonest indication of emergency obstetric hysterectomy was postpartum hemorrhage due to uterine atony which was seen in 13(35.1%) cases, followed by ruptured uterus in 11(29.7%) cases, placenta previa in 6(16.2%) cases, and couveliar uterus in 5 (13.5%) cases and placenta accreta in 2 (5.4%) cases. Commonest maternal complications were urinary tract infection in 6(16.2%) patients followed by DIC in 5(13.5%) patients. Maternal mortality was seen in 2 (5.4%) patients.

Conclusion: In our study frequency of emergency obstetric hysterectomy was high. Most common indication was rupture uterus, post partum hemorrhage due to atony uterus and placental causes. After UTI, disseminated intravascular coagulation was most common complication seen. 2 patients were expired.

Sever Emergency obstetric hysterectomy when performed in selected cases at an appropriate time helps in bringing down maternal mortality.

Keywords: Maternal outcomes, hysterectomy, rupture uterus, multiparous, morbidity

INTRODUCTION

Obstetric hysterectomy includes both cesarean and postpartum hysterectomy. Cesarean hysterectomy is an emergency procedure and is performed in the event such as uterine rupture or uncontrollable postpartum hemorrhage. Postpartum hysterectomy can be performed a few hours of normal delivery, instrumental delivery or caesarean section or sometime may be done in puerperium.

Peripartum hysterectomy, although rare in modern obstetrics, remain a life saving procedure when severe obstetrical hemorrhage fails to respond to conservative treatment. Skills necessary for its performance are best acquired under an experienced mentor during scheduled non emergency cases[1-3].

This life saving obstetric procedure has been in use for more than 100 years. Majority 55% of cesarean hysterectomies are being done for postpartum hemorrhage, caused by uterine atony in two thirds of the cases.1 Rupture uterus is the second most common indicator for emergency obstetric hysterectomy, 60% women undergoing the procedure had a previous history of cesarean delivery. Third most frequent cause of emergency obstetric hysterectomy is placenta accreta with or without placenta previa[4-6]. The incidence of this

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Received: 3 Dec 2008; Accepted: 03 July 2009

devastating problem is increasing secondary to the increased incidence of cesarean section[7-9].

The indications for obstetric hysterectomy kept changing with passage of time. Knowledge of this operation and skills in its performance can save many lives. The purpose of this study is to review the frequency, indications and maternal outcome of emergency obstetric hysterectomy and to provide guidelines for residents who may not been exposed to this procedure.

PATIENTS AND METHODS

This retrospective study was conducted in gynaecology and obstetric unit of Nawabshah Medical College Hospital from 2nd May 2005 to 31st April 2008. During the study period total 3089 patients were delivered. Out of these, 37 patients underwent cesarean hysterectomy.

All hysterectomies were performed after 28 week of gestation. We retrieved the charts of all cases, emergency obstetric hysterectomy was done. The charts were analyzed for age, parity, social status, booking status, indication for hysterectomy, operative notes, maternal outcome, complications and postoperative status. Mortality register was also checked for the causes of maternal deaths.

Data was analyzed on SPSS version 11 and frequencies were calculated.

RESULTS

During the study period, there were 3089 deliveries. Amongst these 37 had emergency obstetric hysterectomies giving rise to a frequency of 11.9 /1000 cases.

Majority of the patients 16(43.2%) were in between age group of 31-40 years, while 15(40.5%) were more than 40 years of age. 5(13.5%) patients were in age group of 21-30 years and 1(2.7%) patient was less than 20 years (Table-1).

Out of these 37 patients 14(37.8%) were booked and 23(62.1%) were unbooked.

Regarding parity, 23(62.1%) were multiparous, 12 (32.4%) patients were grand multiparous and 2(5.4%) patients were primiparous. 24(64.8%) patients belongs to poor class, 11(29.7%) belongs to middle class while 2(5.4%) belongs to upper class (Table 1). Twenty four (62.16%) hysterectomies were done during cesarean section while 13(35.13%) hysterectomies were done after vaginal delivery.

Commonest indication of emergency obstetric hysterectomy was postpartum hemorrhage due to uterine atony which was seen in 13(35.1%) cases, followed by ruptured uterus in 11(29.7%) cases, placenta previa in 6(16.2%) cases, and couveliar uterus in 5 (13.5%) cases and placenta accreta in 2 (5.4%) cases (Table 2). Total abdominal hysterectomy was done in 14(37.8%) cases while subtotal hysterectomy was done in 23 (62.16%) cases.

Commonest maternal complications were urinary tract infection in 6(16.2%) patients followed by disseminated intravascular coagulation (DIC) in 5(13.5%) patients , pyrexia of more than 1000F and wound infection in 3(8.1%) patients, injury to gut in 2 (5.4%) patients, injury to urinary bladder in 4 (10.8 %) patients and 1 (2.7%) patient had repeat laparotomy. 6 (16.2%) patients were admitted to intensive care unit while 1(2.7%) patient had pulmonary edema and 1 (2.7%) had acute renal failure. 2 (5.4%) patients developed deep venous thrombosis (DVT). Maternal mortality was seen in 2 (5.4%) patients (Table 3).

Table-1: Socio demographic data.

Indication	No of Patient	%
Age		
< 20	1	2.7
21-30	5	13.5
31-40	16	43.2
>41	15	40.5
Parity		
Primi	2	5.4
Multi	23	62.1
Grand Multi	12	32.4
Socioeconomic Condition	24	64.8
Poor		
Middle	11	29.7
Upper	2	5.4

DISCUSSION

During the study period, the hysterectomy rate for life threatening obstetric hemorrhage/ complications was 11.9 /1000 deliveries which

Table-2: Indications of Emergency Obstetric Hysterectomy

Indication	No of Patient	%
PPH due to uterine atony	13	35.1
Rupture uterus	11	29.7
Placenta previa	6	16.2
Couveliar uterus	5	13.5
Placenta percreta	2	5.4

Table-3: Maternal Complications

Complications	No of Patient	%
Urinary tract infection	6	16.2
ICU admission	6	16.2
DIC	5	13.5
Injury to urinary bladder	4	10.8
Wound infection	3	8.1
Febrile morbidity	3	8.1
Injury to gut	2	5.4
DVT	2	5.4
Mortality	2	5.4
Pulmonary edema	1	2.7
Acute renal failure	1	2.7
Broad ligament hematoma	1	2.7
Repeat laparotomy	1	2.7

is high compared to the studies carried out in different hospitals of the world.

In Nigeria the incidence is 1 per 348.6 deliveries[10]. Ozumba et al from the same country reported an incidence of 1:520 from a teaching Hospital[11]. The incidence is markedly low in developed countries due to good antenatal care; improve literacy rate and good nutritional and social factors. In Birmingham the incidence reported is 1:1480[12] while in Manchester the figure reported by Thonet[13] is 1:15525. Incidence in China was very high during 1960's and 1970's being 1 per 351 deliveries[14] but due to improvement in health services the incidence decreased markedly. A study by Wang[15] showed an incidence of 1:1820 deliveries and Soonge et al[16] reported an incidence of 1 per 2799 deliveries. Kasrawi showed incidence of 1 per 3459 deliveries from Kuwait[17]. This could be due to fact that our hospital is tertiary referral center, where most of cases are dealt by traditional birth attendants and delayed referral results in a moribund condition of the patient.

In our study majority patients were from very poor class. 62.1% were unbooked all patients were received and operated in emergency that is why our incidence is high. The situation is different in developed countries.

The main indication in our study was uterine rupture, uterine atony and placental disorders. This is quite similar to the study done by Rukhsana Shaheen in Lahore[18].

The pattern is typical in the third world countries. Abnormal placentation has emerged as an important etiologic factor since last decade as supported by World wide reports for example Birmingham[12] 50 %, Kuwait[17] 64%, in Italy[19] 55% cases of obstetric hysterectomies were done due to placental problems. In our study 2 (5.4%) patients had placenta accreta. Historically placenta accreta was an incidental finding at the time of delivery and was associated with high maternal morbidity and mortality[20]. The development of new imaging techniques, such as MRI and transvaginal color Doppler sonography, has allowed antenatal diagnosis of this condition and elective preoperative planning of the obstetric and anesthetic management of these patients (elective cesarean hysterectomy)[21, 22].

The incidence of this devastating problem is increasing secondary to the increased incidence of cesarean section[20,23]. In 62.16% of our patients had subtotal hysterectomy. The reason for increase incidence of subtotal hysterectomy is to save time, and avoid excessive hemorrhage. It has been suggested that the routine performance of emergency total abdominal hysterectomy is unnecessary and potentially harmful[24].

In our unit uterine atony is managed initially with manual massage of the uterus, administration of intravenous oxytocin and ergometrine supplemented by the replacement of blood volume with crystalloids, colloids and blood transfusion. Prostaglandins F2 alpha and rectal misoprostol have also been used.

Surgery is considered when these conservative measures have failed.

CONCLUSION

In our study frequency of emergency obstetric hysterectomy was high. Most common indication was rupture uterus, post partum hemorrhage due to atony uterus and placental causes. After UTI, disseminated intravascular coagulation was the most common complication seen.

Every effort should be made to pick up the cases during their antenatal visits, which had risk factors for hysterectomy. Patients with those risk factors should be counseled antenatally regarding the possibility of hysterectomy. These patients should be delivered in hospital.

Improving antenatal booking, nutritional, educational status, and Training of traditional birth attendants (TBAs) provision of health care during pregnancy and delivery can reduce its incidence, and associated morbidity & mortality.

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