Emergency Obstetric Hysterectomy: A Life Saving Procedure

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Objective: To determine the incidence, indications, associated factors and complications of obstetric hysterectomy in study patients. Design: Retrospective, observational study. Place & Duration of Study: Gynae unit III, Lady Willingdon Hospital Lahore, affiliated with King Edward Medical College Lahore. Study Period: January 2002 to December 2003.

Materials & Methods: During the mentioned period patients admitted in labour room and had obstetric hysterectomy were included in the study. The data reviewed included patient profile, socioeconomic status, obstetric history, antenatal booking, details of present labour, indications for obstetric hysterectomy and the fetomatemal morbidity associated with the obstetric hysterectomy. Results: The study shows the relative risk of obstetric hysterectomy among unbooked versus booked patient was 2. Most of the patients were unbooked and had prolonged trial of labour out side the hospital. A trend between the advancing age and the incidence was found. In the study 16/28 (i.e., 57%) patients belonged to age group between 30-35 years. Increasing parity had relation with the increasing incidence of obstetric hysterectomy, 18/28 (64.5%) were Para 4 or more. The most common indication of obstetric hysterectomy was ruptured uterus in 11/28 (i.e.30%) patients. Out of 28 patients who had obstetric hysterectomy, 2 patients died. The other complications were febrile morbidity in 57%, UTI in 50%, wound infection in 21%, urinary bladder injury in 7% and DVT in 3.5%. Conclusion: Regular antenatal care, supervised deliveries, early referral of indicated cases to the hospital and limiting family size can reduce the maternal morbidity & mortality.

Key Words: Obstetric hysterectomy, Indications.

The effective emergency obstetric care has been proposed as a major necessity in the reduction of maternal mortality. Efforts have been concentrated towards increasing hospital attendance. These have much to be commended, but many fatal and life threatening complications are unpredictable and unpreventable. Emergency postpartum hysterectomy is one marker of severe obstetric morbidity. Obstetric hysterectomy has been described as catastrophic procedure, and is often performed in acute life threatening emergencies. The difficulty associated with the procedure is not necessarily the surgical technique, but in the support of such ill patients. These difficulties are more pronounced in developing countries, where institutions facilities are lacking and patients present in hospital very late when pathology is advanced. The maternal mortality ranges from 0 to 29.8%. The higher incidence and mortality tend to be in report from developing countries. It is accepted that obstetric hysterectomy associated mortality is often due to preceding complications. The adequacy of care should nevertheless be evaluated and the need for specific improvement highlighted to avert such mortality in future.

Methods: The retrospective study was conducted in Gynae Unit III, Lady Willingdon Hospital Lahore from January 2002 to December 2003. All the charts of the patients who had emergency obstetric hysterectomy for the mentioned period were reviewed. Data was collected. Information obtained included age, parity, booking status, obstetrical history specially the details of present pregnancy and details of labour either spontaneous or induced, duration, augmentation and place of labour. The indications for surgery & the details of surgery were documented. Other informations obtained included amount of blood loss, type of hysterectomy and complications encountered & duration of patient’s hospital stay. In addition, the following aspects of maternal morbidity were sought: febrile morbidity, urinary tract infection, wound infection /dehiscence, blood transfusion, disseminated intravascular coagulation (DIC), injury to lower urinary tract (bladder or ureter), return to operating theatre for continuous hemorrhage and intensive care.

Results:

In the above mentioned period from Jan 2002 to Dec 2003 there were 6880 deliveries and 28 obstetrical hysterectomies performed. The incidence of obstetric hysterectomy was 28/6880(0.4%). The booked patients 0.27% (4/1480) as compared to nonbooked patients 0.54%
The relative risk of obstetric hysterectomy in non-booked versus booked patients was 2. The age of patient was the important risk factor (Table No.1). Among 28 obstetric hysterectomies, one hysterectomy was done in younger patient of 20 years old who had hysterectomy due to PPH (placenta previa and not responding to the other conservative methods. Out of 28 cases, 18 cases (i.e., 70%) were in the age group 30-35 years. The study shows the frequency of increase incidence of obstetric hysterectomy with increasing parity (Table No.2). In the study 20/28 patients (i.e., 71.5%) were Para 4 or more.

In the study 15/28 patients (i.e., 54%) had previous delivery by cesarean section while 12/28 patients (i.e., 43%) had previous vaginal deliveries. The indications for obstetric hysterectomy in the study were ruptured uterus 14/28 (i.e., 50%), post partum haemorrhage due to atony of uterus in 9/28 (i.e., 32%), abnormal placentaion (placenta previa or morbid adherent placenta) in 4/28 (14%) cases, and secondary PPH in 1/28 (3%). In the study, 4/28 patients (14%) had subtotal hysterectomy while 24/28 patients (86%) had total hysterectomy. Conservative surgical methods including the internal iliac artery (anterior division) ligation and uteroovarian vessel ligation were tried in 8/28 patients (29%) before proceeding to obstetrical hysterectomy.

Regarding the maternal mortality, there were 2/28 (7.1%) maternal deaths. One death was due to DIC and uncontrolled haemorrhage while other due to cardiac failure. The peripartum blood loss ranged from 1.5 liter to 5 liters. Patient’s blood transfusion ranged from 2.0 units to 14 units of blood, FFP or platelet concentrates. Postoperative morbidity included febrile illness, wound infection, and UTI. There were 2 cases of urinary bladder injury one was previously associated uterine trauma while the other was during procedure of hysterectomy. Bladder injury was repaired during the procedure of hysterectomy. There was no case of ureteric injury. There was one case of DVT which was treated medically.

Table - I: Age of patients

<table>
<thead>
<tr>
<th>Age (Years)</th>
<th>Obstetric Hysterectomy (no)</th>
<th>Obstetric Hysterectomy (%age)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-25</td>
<td>01</td>
<td>3.5</td>
</tr>
<tr>
<td>26-29</td>
<td>05</td>
<td>18</td>
</tr>
<tr>
<td>30-35</td>
<td>18</td>
<td>64.2</td>
</tr>
<tr>
<td>36-43</td>
<td>04</td>
<td>14.3</td>
</tr>
</tbody>
</table>

Table - II: Parity of patients

<table>
<thead>
<tr>
<th>Parity</th>
<th>Obstetric Hysterectomy (no)</th>
<th>Obstetric Hysterectomy (%age)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Po</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>P1</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>P2</td>
<td>1</td>
<td>3.5</td>
</tr>
<tr>
<td>P3</td>
<td>6</td>
<td>21.4</td>
</tr>
<tr>
<td>P4 or more</td>
<td>20</td>
<td>71.6</td>
</tr>
</tbody>
</table>

Discussion:
Obstetric hysterectomy refers to surgical removal of the pregnant or recently pregnant uterus. The procedure is indispensable for management of intractable obstetrical hemorrhage unresponsive to other treatment. The procedure frequently is life saving and should be within the capabilities of all obstetric consultants. Eduardo Porro reported the first case report of the patient who survived hysterectomy after cesarean delivery.

The incidence of the obstetric hysterectomy reflects the situation of obstetric emergencies. The high incidence of obstetric hysterectomy reflects the poor usage of modern obstetric facilities until severe complications set in. In the study the incidence of peripartum hysterectomy was 0.4%. This compares with the already published studies from other hospitals of the same socioeconomic environment but the incidence is different from the studies from the developed countries. This study showed a significant association between peripartum hysterectomy, socioeconomic status of the patient booking status, increasing maternal age, parity and previous cesarean section. The association is likely to be due to the increase in the incidence of uterine rupture, uterine atony post partum haemorrhage and the increased incidence of cesarean section in the above-mentioned group. In the study 22% (i.e., 79%) patients were more than 30 years, 27% (i.e., 97%) patients were multipara and most of the patients were unbooked. The major indication for the obstetric hysterectomy in study was uterine rupture. This correlates with the study by S.A. O'kogbenin but contrast with the reports from the developed countries.
Most of the patients with the uterine rupture were unbooked patients with high parity that had their labour conducted by traditional birth attendants. Atony of the section either in current or previous delivery was noted in obstetric hysterectomy hemorrhage management. The high relationship of unresponsive to conservative methods of the postpartum patients. In cases of uterine atony, subtotal hysterectomy is performed in developing countries where most of the patients present in advanced pathology. But in study subtotal hysterectomy has been performed in 4(i.e., 14%) patients. In cases of uterine atony, subtotal hysterectomy is often quicker and safer than total hysterectomy, in terms of the potential injury to lower urinary tract. Direct major vessel ligation (uteroovarian, internal iliac artery ligation) may have role but can be ineffective in controlling severe uterine haemorrhage.

Peripartum hysterectomy could have disastrous consequences. There were maternal deaths in the study. The high maternal mortality is reflected in published studies where maternal mortality varies from 5.5% to 20%. Disseminated intravascular coagulation and cardiac failure were the identifiable causes of the maternal mortality. Quick intervention, availability of blood and the intensive care unit monitoring were the major predictors of the maternal morbidity and mortality.

Obstetric hysterectomy is the life saving procedure. But the high maternal morbidity and loss of future fertility particularly in young women needs consideration for the procedure. All the obstetric units should have clear protocol for this emergency procedure. Regular antenatal care, supervised deliveries and limiting family size can decrease maternal mortality and morbidity.

References: