

## SEPTIC INDUCED ABORTIONS

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**Background:** Induced abortions are not infrequent in our community. Being the only tertiary level care hospital in Hazara division, Ayub Teaching Hospital frequently receives cases of induced abortions with complications attempted by inappropriately trained personnel. It was decided to study the frequency of such cases in our admitted patients, complications and their outcome in such risky situation. **Method:** A cross sectional study was conducted from January 2006 to December 2007 in Gynae-B Unit, Ayub Teaching Hospital, Abbottabad. All admitted patients in the unit in the 1<sup>st</sup> trimester of pregnancy and handling outside the hospital were included in the study. **Results:** In two years period total Gynae admissions were 1090. There were 152 (13.95%) cases of spontaneous 1<sup>st</sup> trimester abortions and 52 (4.7%) cases of induced abortions which are included in the study. Age range of the patients was between 20–45 years, with a mean of 35 years. Majority of the patients were grand multigravidas belonging to lower socioeconomic group and not using any contraception. Twenty patients (38.4%) presented with heavy per vaginal bleeding due to incomplete nature of the procedure. Twelve patients 23% presented in shock due to excessive per vaginal bleeding. Ten patients 19.2% had uterine perforation and intraperitoneal haemorrhage. Two patients 3.8% had gut injury associated with uterine perforation. Three patients 5.7% developed septicaemia due to uterine gangrene. Ten patients 19.2% had acute pelvic infection presented with pelvic abscess and acute pelvic inflammatory disease. Maternal motility in our study was 2 out of 52 (3.8%). **Conclusion:** Induced septic abortions contribute significantly to maternal morbidity and mortality. Improving literacy rate in our female population and effective family planning should reduce its incidence. Different resources should be used to develop awareness of the hazards of induced abortions in the community.

**Keywords:** Unsafe abortion, Septic induced abortion

### INTRODUCTION

An abortion that becomes complicated with infection is called septic abortion and this complication is frequently associated with induced abortions. World health organization defines induced abortion as the one when unwanted pregnancy is terminated either by the persons lacking necessary skills or is performed in an environment which lacks minimal medical standards.<sup>1</sup> According to the WHO, 2–12% of maternal deaths in Pakistan are due to complications of abortions.<sup>2</sup>

Unplanned and unwanted pregnancies are major public health problems both for developed and developing countries. Women from all backgrounds seek abortions regardless of religious beliefs and fears of the dangers of procedures. Ninety five percent of all induced abortions occur in developing countries.<sup>3</sup>

According to the WHO, 400–600 deaths/100,000 abortions occur in Asia and Africa as compared to 0.6/100,000 in developed countries. Ten to fifty percent of the females who undergo unsafe abortions develop serious complications like intra abdominal injury, sepsis, haemorrhage and need for advanced medical and surgical care.<sup>4</sup>

Being illegal/non-religious in our country induced abortions are performed by untrained personnel usually lady health visitors, untrained birth attendants and nurses in dirty environment with subsequent high risk of haemorrhage, infection and injury to genital tract. Apart from the effects of acute pelvic inflammatory disease, patients suffer from the

chronic effects of pelvic infections like chronic pelvic pain, dyspareunia and infertility.

### SUBJECTS AND METHODS

This study extends over a period of two years from January 2006 to December 2007 conducted in Obs/Gynae 'B' Unit of Ayub Teaching Hospital, Abbottabad.

All the patients in first trimester of pregnancy and history of being handled outside the hospital were included in the study. Detailed history was taken followed by general physical examination with special emphasis on general state of health and severity of the anaemia. Temperature, pulse and blood pressure of the each patient were recorded. Per abdomen examination was followed by detailed pelvic examination to assess the amount of bleeding, condition of cervix, size of the body of the uterus and status of adnexae.

Base line investigations included checking for blood group and Rhesus factor, complete blood picture, blood glucose random and urinalysis. Complete coagulation profile and renal function tests were done in all the patients. Pelvic ultrasound was done to exclude retained products of conception and to confirm pelvic abscess. Endo cervical swab was taken for culture and sensitivity.

Initial resuscitation included saving two intra venous lines using wide bore cannula, adequate hydration and triple antibiotic cover (third generation cephalosporin and infusion metronidazole. (Gentamycin

injections were added after the results of renal functions were available). Arrangements were made for blood transfusion and patients were prepared for surgery (emergency evacuation and curettage of the uterus) but in many cases it also involved laparotomy for repair of uterine perforation, hysterectomy for gangrenous uterus, repair of intestines in cases of gut injury and drainage of pelvic abscess if present.

Post-operative care needed intravenous antibiotic cover according to culture and sensitivity results and fresh blood transfusion to correct anaemia. Intensive care unit management was provided to critically serious patients. Severely anaemic patients needed six units of blood transfusion and those with moderate anaemia needed four units of blood transfusion, illustrating the near miss mortality of this condition.

## RESULTS

During this study period there were 1090 Gynae admissions in the unit. Among them, there were 152 cases of spontaneous first trimester miscarriages and 52 cases of induced abortions with history of unplanned pregnancy and handling outside the hospital. Age range of the patients was between 20 to 45 years with mean age of 34.8±5.67 years (Table-1). Mean parity was 6±2.1 SD with 95 % confidence interval (5.9–6.1) (Table-2). Majority of the patients belonged to the middle class (Table-3). Majority of the patients presented with haemorrhage (Table-4).

**Table-1: Patients by age**

| Age group  | No. of Patients | %    |
|------------|-----------------|------|
| 20–30years | 10              | 19.3 |
| 30–40years | 30              | 57.7 |
| 40–45years | 12              | 23   |
| Total      | 52              | 100  |

**Table-2: Patients by parity**

| Parity | No. of Patients | %    |
|--------|-----------------|------|
| 1–4    | 10              | 19.3 |
| 5–7    | 30              | 57.7 |
| 8–10   | 12              | 23   |
| Total  | 52              | 100  |

**Table-3: Socioeconomic status of patients**

| Socioeconomic status | No of patients | %    |
|----------------------|----------------|------|
| Poor                 | 17             | 32.6 |
| Middle class         | 35             | 67.4 |
| Rich                 | 0              | 0    |
| Total                | 52             | 100  |

**Table-4: Clinical presentation**

| Clinical presentation  | No. of patients | %    |
|--|-----------------|------|
| Excessive vaginal bleeding due to retained products of conception. | 20              | 38.4 |
| Shock  | 12              | 23   |
| Uterine perforation and intraperitoneal haemorrhage.               | 10              | 19.2 |
| Uterine perforation and injury to small intestine.                 | 2               | 3.84 |
| Septicaemia and uterine gangrene.                                  | 3               | 5.7  |
| Pelvic abscess.  | 5               | 9.6  |

|                                    |   |     |
|------------------------------------|---|-----|
| Acute pelvic inflammatory disease. | 5 | 9.6 |
|------------------------------------|---|-----|

The most frequent method used for termination of pregnancy in our study was dilatation and curettage (Table-5). Mostly the patients were managed by evacuation and curettage. Laparotomy was also needed for the management of uterine perforation, drainage of pelvic abscesses, repair of gut injuries and hysterectomies (Table-6). Post-operation morbidity is shown in Table-7.

**Table-5: Methods used for induced abortions**

| Methods                        | No. of patients | %    |
|--------------------------------|-----------------|------|
| Dilatation and curettage.      | 30              | 57.6 |
| Vacuum aspiration              | 10              | 19.2 |
| Copper T insertion             | 5               | 9.6  |
| Intracervical laminaria sticks | 2               | 3.8  |
| Oral misoprostol               | 5               | 9.6  |
| Total                          | 52              | 100  |

**Table-6: Surgical procedures needed to manage complications of septic induced abortions.**

| Surgical procedure   | No. of patients | %    |
|--|-----------------|------|
| Evacuation and curettage   | 32              | 61.5 |
| Laprotomies for repair of uterine perforation and drainage of pelvic abscess | 15              | 28.8 |
| Hysterectomy (Uterine gangrene)  | 3               | 5.7  |
| Laprotomies for repair of uterine perforation and repair of gut injury       | 2               | 3.8  |

**Table-7: Post-operation morbidity.**

| Post operative morbidity                            | No. of patients | %    |
|---|-----------------|------|
| Need for 4-6 units of blood transfusion             | 52              | 100  |
| Prolonged hospital stay due to fever (7days–3weeks) | 15              | 28.8 |
| Post operative wound infections                     | 15              | 28.8 |
| Deep vein thrombosis                                | 2               | 3.8  |
| Need for prolonged injectable antibiotic cover      | 15              | 28.8 |
| Acute renal failure                                 | 3               | 5.7  |

In our study two patients died of septicaemia due to late presentation.

## DISCUSSION

World wide millions of women seek induced abortions which if successful and complete remain a secret and if complicated get highlighted due to their management at hospital level. The hospital data represents just tip of the iceberg. The problem at community level is much bigger and graver. It is a problem that puts an extra burden on already over worked staff and limited resources of government hospitals. Septic induced abortion is an important cause of maternal morbidity and mortality and is completely preventable.<sup>5</sup>

The frequency of induced abortions in our study is 4.7%. While studies elsewhere give frequency of 3.7%, in Peshawar, 8.6% in Lahore and 7% in Karachi.<sup>6-8</sup>

Out of 52 cases (4.7%) of induced abortions included in our study forty two patients (80.7%) presented with haemorrhage both external and internal, 10 patients (19.2%) had serious infections and two patients (3.8%) had gut injury along with haemorrhage and infection. These results are in contrast to the study conducted in Peshawar at Khyber Teaching Hospital, where 37.7% of patients presented with haemorrhage, 42.8% with sepsis and 21.42% with visceral injuries. A study in Karachi shows incidence of haemorrhage 24%, sepsis 30% and visceral injuries 41%.<sup>9</sup> This difference could be due to difference in population of patients studied. In our study patients belonged to remote areas like villages, main method used for termination was dilatation and curettage by untrained personnel, due to which haemorrhage was main presenting symptom.

Septic abortion is the one that gets complicated with infection and is associated with fever, endometritis and parametritis. Acute consequences of pelvic inflammatory disease can spread to the state of septicaemia and Disseminated Intravascular Coagulation especially in the presence of low resistance of the patient and high virulence of organisms. In chronic phase, patient faces chronic Pelvic inflammatory disease with consequent dyspareunia, dysmenorrhoea and infertility. All these consequences occur in the back ground of an unwanted pregnancy being terminated by an untrained lady health visitors or *dai* in a dirty environment with the promise of maintaining secrecy.

In our study it was noted that majority of the patients were middle aged, multigravidas and illiterate women belonging to poor and lower middle socioeconomic group. These results are comparable to the other studies conducted in Khyber Teaching Hospital Peshawar and Karachi in Jinnah Post Graduate Medical Centre. In a study from Bangladesh results are in agreement with our results.<sup>10</sup>

One study from Karachi has high lighted that educated women are more conscious of their family size and birth spacing and they are more likely to seek termination of unplanned pregnancy.<sup>11</sup>

The population of the patients with induced abortions is usually anaemic and have low body reserves due to repeated pregnancies, lactation and poor nutrition. They do not observe contraception and take unsafe abortion as method for birth spacing. It has been observed that people are concerned more about the side effects of different methods of contraception like insertion of intra uterine contraceptive device, using injections or pills but refuse to understand the hazards of unsafe abortions by unskilled persons.<sup>12</sup>

The process of abortion in Pakistan in considered sinful and law also prohibits it but despite this large number of abortions are conducted in the

country irrespective of fear of procedure, legal implications and religious beliefs.<sup>13</sup>

Unwanted pregnancy is a significant public health problem both in developed and developing countries. Morbidity and mortality in developed countries is much less due to adequate medical facilities and liberalization of laws of abortion but in our country due to legal restrictions and religious beliefs women turn to nearby *dais* and lady health visitors for unsafe abortion and become prone to high risk of haemorrhage, infection, trauma to genital tract and intestines.<sup>14</sup>

World wide millions of women conceive unwanted pregnancy, outcome of which will be effected by the age of the patient, family size, socioeconomic status and availability of abortion services. Influence of the rest of the family members especially of husband and in-laws is also strong. In our country government hospitals are the only source of safe medical care to the poor communities. Over worked staff does not welcome the patients seeking induced abortions for unplanned and unwanted pregnancies. When law prohibits abortions, properly trained personnel will not be willing to perform it and such services will not be available in government hospitals. Attitude of the medical staff is also important in the short and long term management of such cases.<sup>15</sup>

Abortions can be self induced. Patients who want to get rid of unwanted pregnancy can use different methods like excessive physical activity and blows to abdominal wall. Different abortifacients can be used orally and vaginally. Vaginal douching with various chemicals are also reported, like soapy solutions, inserting sharp objects into the cervix and uterus like knitting needles is also tried. Now oral and vaginal use of different doses of misoprostol is also practiced. Inappropriate use and heavy doses of misoprostol can cause excessive bleeding and patients are at high risk of serious infections as well.<sup>16-18</sup>

In our study it is noted that the commonest method used for un safe abortion is dilatation and curettage, followed by insertion of laminaria tents by *dais* in villages and towns. *Dais* also insert match sticks and cotton buds dipped in various chemicals and irritants into the cervix. It is in such cases that chronic pelvic inflammatory disease and subsequently infertility follows. *Dais* and lady health visitors also insert intrauterine contraceptive devices in the pregnant uterus. When bleeding starts patients are brought to government hospitals for emergency management and evacuation of uterus. Many of such cases go un-noticed as patients conceal the history of handling and just present with incomplete miscarriage.<sup>19-22</sup>

Morbidity of unsafe abortions include excessive bleeding, trauma to the genital tract,

intestines and infections. Patients also present in shock due to excessive haemorrhage. Infection can spread up to the limit of septicaemia and DIC. All these complications need efficient medical and surgical management in a centre properly equipped and staffed. Intensive care management may be needed in critically serious patients.<sup>23-26</sup>

Women who recover from the effects of septic induced abortions are at a high risk of having another episode of such mishap. They need counselling during their recovery phase with strong emphasis on effective family planning and knowledge of availability of emergency contraception. It is the responsibility of health care providers to discuss both short term and long term consequences of unsafe abortions.<sup>27,28</sup>

## CONCLUSIONS

Septic induced abortions are significant public health problem. Awareness of hazards of induced abortions and effective family planning can reduce its incidence.

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