



Septic abortion

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OBJECTIVE(S) : To study the incidence, socioeconomic and demographic precedent factors, clinical features, management, complications, and maternal morbidity and mortality of septic abortion with special emphasis on unmet needs of safe abortion.

METHOD(S) : One hundred and twenty two cases of septic abortion following voluntary abortion were admitted and analyzed in a retrospective study conducted from 1st May, 2003 to 30th April, 2004 at our tertiary health care center.

RESULTS : There was a total of 5003 obstetrical admissions for pregnancy and its related problems, out of which 352 (7.04%) were for abortions – threatened, incomplete, inevitable, missed, and septic ones resulting from induced abortions carried out outside. One hundred and twenty two women had septic abortion giving an incidence of 34.66% (122/352). Their mean age was 30.03 years. There were 7 (5.74%) primigravidas and 115 (94.26%) multigravidas, out of whom 36.62% (42/115) were grand multiparas. One hundred and thirteen of the 122 were from rural areas. 47.54% (58/122) were admitted in a state of septic shock. 17.21% (21/122) required exploratory laparotomy and 80.95% (17/21) of them required hysterectomy. Total maternal mortality during this period was 112 out of which 26 (23.21%) were due to septic abortion.

CONCLUSION(S) : Increasing awareness, making legal abortion services easily available to the masses at cheaper cost, and stringent laws to contain quackery are required to decrease the incidences of illegal and septic abortions, and related maternal morbidity and mortality.

Key words : unsafe abortion, voluntary abortion, septic abortion

Introduction

At the beginning of the 21st century, it is a matter of great concern that maternal mortality rate is still alarmingly high. In Uttar Pradesh maternal mortality is 707/100,000 live births, the highest in India. Further, maternal mortality is just the tip of iceberg of maternal morbidity because for every maternal death there are more than a hundred women who have morbidity. Twelve percent maternal deaths in India are caused by septic abortion. The National Population Policy 2000 prepared by the Ministry of Family

Health admits that unsafe abortion is a key factor in Uttar Pradesh's high maternal mortality rate.

Mortality rate after voluntary termination of pregnancy (MTP) is 0.6/100,000. In India, even 35 years after legalisation of abortion only 10% of total number of estimated abortions are registered or legal. Septic abortion is a result of unsafe abortion which is defined as a procedure for the termination of unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards or both (WHO definition) ¹.

Paper received on 15/04/2005 ; accepted on 13/03/2006

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Present study analyzes the cases of septic abortion in a tertiary teaching hospital in Uttar Pradesh, to find out the resultant maternal morbidity and mortality with special emphasis on various contributing factors and unmet needs of safe abortion.

Methods

A retrospective cohort study was conducted from 1st May, 2003 to 30th April, 2004 at our tertiary health care center. A total of 122 cases of sepsis following induced abortion were admitted during this period. They were analyzed with respect to various demographic factors, clinical features, management, complications, maternal morbidity and mortality, and surgical intervention needed. Data were collected from admission register, labor room register, indoor case sheets, referral forms, and maternal mortality register.

Septic abortion is an infection of the uterus and its appendages following any abortion². Sepsis is common after illegally performed induced abortion. It is characterized by temperature > 100.4°F, offensive or purulent vaginal discharge, lower abdominal pain and tenderness, and a history of unsafe intervention.

For all clinical and practical purposes presence of two or more of these criteria was considered as case definition of septic abortion.

Grading of infection

After considering all features and investigations depending on severity of infection, the patients were categorized into four grades. Infection localized to the uterus constituted grade I infection (40.2%) while infection spreading to pelvis and abdomen without signs of generalized sepsis was categorized as grade II (30.3). Patients having septicemia with clinical evidence of infection viz., fever, hypothermia, tachycardia, tachypnea and evidence of inadequate organ perfusion constituted grade III (12.3%) while grade IV infection (17.2%) denoted patients with septic shock and septicemia with sustained decrease of systolic blood pressure to \leq 90 mm Hg for more than one hour in spite of adequate infusion of fluids.

Results

There was a total of 5003 admissions for pregnancy and its related problems, out of which 352 (7.04%) were for abortions (threatened, incomplete, inevitable, missed, and septic). One hundred and twenty two women had septic abortion following unsafe induced abortion giving an incidence of 34.66% (122/352) i.e., 2.44% of total admissions. Their mean age was 30.3 years (range 17 - 45). Most common age group was 20-30 years (48.2%).

Most of the cases were from very low socioeconomic status and 113 (92.62%) were from rural area. There were 7 (5.74%) primigravidas, and 115 (94.26%) multigravidas of whom 36.62% (42/115) were grand multiparas (parity 4 or more). In 90% cases previous deliveries were at home and 4

(3.28%) women had previous one abortion. Two were widows and three were unmarried.

Most women chose to terminate the pregnancy because they did not want any more children. Although most of the women were aware of induced abortions 78% were not aware that induced abortions could be labeled as legal or illegal and of the availability of voluntary abortion (MTP) services run by government. Sixty-two percent of the women had knowledge of some kind of contraceptive measure but only seven (5.74%) had ever used some contraception.

Table 1 shows the period of gestation at which abortion was attempted and the personnel performing it. Three abortions were tried by dais (untrained midwives) even after 20 weeks. Most commonly abortion was performed between 6 and 8 weeks of gestation. Most common method of termination was instrumentation (68%), followed by medications given vaginally, sticks inserted vaginally, and medications including herbal products given orally. One woman had necrosed uterus and chemical peritonitis due to chemicals used for termination.

Fever, pain in abdomen, vaginal bleeding, and foul smelling discharge were the commonest presenting symptoms. Twenty-six (21.31%) women were admitted within 5 days of interference, 28 (22.95%) within 6 to 10 days and 32 (26.22%) within 11-15 days. Three (2.45%) women came to the hospital two months after the interference with complaints of fever, distension of abdomen and decreased urine output.

Table 2 shows that the largest number of 49 (40.2%) women had grade I infection. Anemia was commonly associated in most of the cases with 21 (17.21%) women having hemoglobin of <6 g/dL, 38 (31.15%) of 6-8 g/dL, and 42 (34.43%) of 8-10 g/dL. Only 21 (17.21%) women had hemoglobin of >10 g/dL. Vaginal swab culture and sensitivity showed that the most common organism was *E. coli* (57.81%) followed by *Klebsiella* (29.69%). Other organisms were *Staphylococcus aureus* (4.69%), *Pseudomonas* (3.13%) *B. hemolytic streptococci* (3.13%) and *Acinobacter* (1.56%). Thirty-nine of the women were found to be tubercular and possibly had unnecessary interference for tubercular amenorrhoea leading to secondary infection. They all responded to antitubercular therapy.

Broad spectrum antibiotics, adequate perfusion, and supportive measures were given as first line therapy. Blood or blood products were required in 68 (55.74%) patients. Evacuation was done in 76 patients. Colpotomy and culdocentesis was required in 13 patients. Exploratory laparotomy followed by drainage of pus was required in 21 patients. Out of 19 patients having uterine perforation, 17

Table 1. Duration of gestation and the personnel performing induced abortion.

Period of gestation (weeks)	Personnel					Total
	Dai	Nurse	Doctor	Self or relative	Not known	
<8 weeks	40	2	11	0	0	53
8-12	32	2	7	2	1	44
13	9	2	2	2	2	17
17	3	2	0	0	0	5
>20	3	0	0	0	0	3
Total	87	8	20	4	3	122

Table 2. Relationship of grade of sepsis to duration of hospitalization and mortality.

Grade of sepsis	Total n=122	Duration of hospitalisation (days)						
		< 1	1-5	5-10	11-15	16-20	21-25	>25
I	49 (40.2%)	4/0	4/0	27/0	14/0	–	–	–
II	37 (30.3%)	–	1/0	3/1	20/2	11/3	2/0	–
III	21 (9.8%)	2/1	2/1	5/1	5/1	3/1	2/1	4/1
IV	15 (12.3%)	12/11	2/2	–	–	1/0	–	–
Admitted/expired	122/26	18/12 (66.66%)	9/3 (33.3%)	35/2 (5.71%)	39/3 (7.69%)	15/4 (26.67%)	4/1 (25%)	4/1 (25%)
Percentage of deaths		46.15% (12/26)	11.54% (3/26)	7.69% (2/26)	11.54% (3/26)	15.38% (4/26)	3.85% (1/26)	3.85% (1/26)

Table 3. Complications.

Complication	Number	Percent
Hemorrhage	56	45.9
Peritonitis	34	27.87
Disseminated intravascular coagulation	12	9.84
Deranged renal function	21	17.21
Deranged liver function	17	13.93
Uterine perforation	19	15.57
Bowel perforation	4	4.10

had hysterectomy, and two had repair of the uterus. Five patients having bowel perforation required ileostomy or resection anastomosis; one developed fecal fistula and expired. High dose of steroids and dopamine infusion were required in 38 women. Eight women also required adrenaline infusion (0.04 – 0.4 mg/kg/minute). Eighteen women required further management in other departments like surgery and medicine. Table 3 shows the complications occurring in patients under study.

Table 2 shows the duration of hospital stay in relation to the grade of sepsis. Average duration was 9.3 days (range 15 minutes to 45 days). Case fatality rate was 26/122 (21.3%). Total number of maternal deaths in our hospital during the period was 112 out of 5003 obstetrical admissions. Septic

abortion as cause of maternal mortality was 26/112 (23.21%). 46.15% (12/26) of the deaths due to septic abortion occurred within first 24 hours of admission. Eleven of them were in grade IV sepsis with septic shock .

Discussion

Our study shows the extent of this problem and its terrible consequences on women's health. The fact that women resort to unsafe abortion despite its risks reflects the unmet need for safe, effective and acceptable ways of avoiding pregnancy or limiting family size. It is unfortunate that even after all efforts at reduction and liberalization of MTP for the past three decades the mortality and morbidity due to septic abortion has not declined significantly.

Most women indulging in unsafe abortion were multiparous and did not want any more children which is contrary to Western literature wherein most cases are unmarried primigravidas of < 25 years age³. Majority of the women were uneducated and from rural areas with low socio-economic status. They were not aware of MTP services or contraceptive measures. This indicates areas where reproductive child health RCH services have not still effectively percolated. When brought to the tertiary center women are often in a moribund condition. Many were brought to the hospital after 15 days of the procedure.

Many had severe complications like disseminated intravascular coagulation, peritonitis, and uterine perforation. Even after reporting to the hospital many women and their family members were reluctant to accept the severity of the problem showing gross ignorance of women's health. There

are striking differences between various studies in different parts of India. Kore et al⁴ from Mumbai studied 27 cases over a period of 4 years with an incidence of 0.57% while our study has 122 cases within 1 year with an incidence of 34.66%. These are only those women who could reach us. There are various contributing factors for this vast difference. The state-wise distribution of approved MTP institutions is relatively good in Maharashtra (1 for 50,568 people) and worst in Uttar Pradesh (1 for 3,27,323 people)⁵.

Conclusion

The tragedy of septic induced abortion is totally preventable. It only needs definitive commitment to women's health. The need of the day is prevention, mainly by providing effective contraception and safe abortion. Prompt diagnosis of any septic complications and their effective treatment at tertiary hospitals would avoid serious consequences.

Reference

1. Ahman E, Seth I. Unsafe abortion. In: Batler P. *Global and regional estimates of the incidence of unsafe abortion and associated mortality*. WHO, Geneva. 2004:1.
2. Rana A, Pradhan N, Gurung G et al. Induced septic abortion: a major factor in maternal mortality and morbidity. *J Obstet Gynaecol Res* 2004;30:3-8.
3. Cunningham FG, Gilstrap LC, Gant NF et al. *Williams Obstetrics, 21st edn*. New Delhi. Mc Graw-Hill. 1997:869.
4. Kore S, Rao S, Pandole A et al. Outcome of septic abortions: Impact of tertiary care. *J Obstet Gynecol India* 2004;54:289-92.
5. Jesani A, Iyer A. Abortion: www.cehat.org/publications/pcOba04.html.