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ORIGINAL ARTICLE

Induced Septic Abortion: Clinical Presentation Management and Outcome

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ABSTRACT

Background & objective: Septic abortion still remains one of the most serious threats to the health of women all over the world. Most women indulge in unsafe abortion, for they no longer want children, but failed to take any contraception. The present study was undertaken to describe their clinical presentation, management and outcome including maternal complications and mortality caused by induced septic abortion.

Methods: This descriptive study was conducted in the Department of Obstetrics & Gynaecology in Dhaka Medical College Hospital, Dhaka, Bangladesh over a period of 6 months between July 2008 to December 2008. All patients with septic abortion up to 28 weeks of gestation admitted to the Department of Obstetrics & Gynaecology at Dhaka Medical College Hospital (DMCH) were the study population. Patients with induced septic abortion with signs of infection were included in the study. However, patients with inevitable abortion, missed abortion, spontaneous septic abortion and septic abortion with the medical disorder were excluded from the study. A total of 50 patients based on above-mentioned eligibility criteria were included in the study. Data were analyzed to describe their clinical presentation, management and outcome, which among others included maternal complications and mortality.

Result: Almost three-fifth of the patients were in their 3rd decade and 26% in their 4th decade of life with mean age of the patients being 27.2 ± 1.6 years. Over 40% were primary level educated and a sizable portion (36%) was illiterate. Majority of the patients was married (96%), house-wife (82%), rural resident (76%) and belonged to poor socioeconomic class (80%). More than 60% of the patients were in 2nd trimester of pregnancy and over two-thirds (68%) were multipara. For initiating abortion, about one-third (32%) used stick inside the vagina, 24% received menstrual regulation, 14% underwent D & C (dilatation & curettage), 22% took oral medication. More than one-third (36%) of the patients aborted for their pregnancy was unwanted, 20% did it because their pregnancy was unplanned. A few patients however mentioned social problem (6%) and husband's illness (2%) as the reasons of induced abortion. The lower abdominal pain (96%) and per vaginal bleeding (94%) were the predominant complaints of the patients followed by followed by fever (72%), discharge of foul-smelling lochia (68%) and abdominal distension (12%). On examination majority (96%) was found anemic, toxic (56%), feverish (82%), with lower abdominal tenderness (60%) and dehydration (50%). On local examination, 80% exhibited signs of bleeding with tender fornics. Open external os, dirty vulva and foul-smelling discharge were observed in 74, 60 and 30% of the cases respectively. Vaginal and cervical injuries were found in few cases. More than 90% of the patients improved and cured and 8% died of complications like generalized peritonitis (2%) and septicemia with renal failure (6%).

Conclusion: Induced septic abortion patients are generally multipara and present in 2nd trimester of pregnancy. In one-third of cases, the stimulus used to initiate abortion is stick inside the vagina. Other procedures adopted are menstrual regulation, D & C, oral ingestion of abortifacient drugs etc. Reasons of abortion include unwanted or unplanned pregnancy. While the cardinal symptoms at presentation are lower abdominal pain and per vaginal bleeding, cardinal signs are anemia, raised temperature and lower abdominal tenderness. Local examination usually exhibits signs of bleeding with tender fornics, open external os. Vaginal and cervical injuries are sometimes present. Majority of the patients cure on conservative treatment. Some however, require operative treatment. Very few patients died of complications (peritonitis and septicemia with or without renal failure) of the disease.

Key words: Septic abortion, presentation, management, outcome etc.

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INTRODUCTION:

The word 'abortion' comes from Latin word 'aboriri' meaning failed to be born. Abortion is defined as interruption of pregnancy before the foetus is viable (usually 22 weeks). The WHO defined abortion as the expulsion or extraction from its mother a foetus or an embryo weighing 500 g or less. It usually corresponds to gestational age of 22-28 weeks. But in the context of Bangladesh the term abortion is still considered up to 28 weeks of gestation.[1] Septic abortion is a serious uterine infection during or shortly before or after an abortion. Induced abortion is defined as the elective termination of pregnancy at or before 28th week of gestation by surgical or medical means.[1]

Every year approximately around 5,80000 women die worldwide due to the complications of pregnancy and delivery and about 70,000 of them die from abortion.[2] WHO has estimated that every year an average of around 27 million legal and 19 million illegal abortions took place throughout the world; one-third of which are unsafe. The maternal mortality rate due to unsafe abortion in Africa and South and South-East Asia, and Latin America is 680, 283 and 119 per 100000 abortions respectively.[3] Septic abortion is an infection of the uterus and its appendages following any abortion, especially, illegally performed induced abortions. It is characterized by a rise of temperature to at least 100.4°F, associated with offensive or purulent vaginal discharge and lower abdominal pain and tenderness.[4]

Septic abortion still remains one of the most serious threats to the health of women throughout the world. Morbidity and mortality from septic abortion are infrequent in countries where induced abortion is legal but are widespread in many developing countries, where it is either illegal or inaccessible.[5] In our country the abortion related death was found to be 21% of total maternal death.[6] Most women indulging in unsafe abortion are multiparous and do not want any more children, but failed to take any contraception. Majority of the women are uneducated and from rural areas with low socioeconomic status. They are not aware of medical termination of pregnancy services. So, they go for termination of pregnancy at a higher gestational age, usually by an untrained birth attendant. Most common method of termination was instrumentation, followed by medications given vaginally, sticks inserted vaginally and medications including herbal products given orally.[7]

Fatal complications associated with induced abortions are hemorrhage relating to abortion process and as a result of injury inflicted during the interference. Injury may occur to the uterus and also to the adjacent structures particularly gut & bladder. Spread of infection leads to pelvic peritonitis, generalized peritonitis, endotoxic shock, acute renal failure, thrombophlebitis. Women seek admission only when their complications turn serious that cannot be managed outside hospital. Maternal mortality due to septic abortion is mostly avoidable by providing effective contraception and if pregnancy occurs taking the service of skilled healthcare provider.[8] The present study analyzed the cases of induced septic abortion in Dhaka Medical College Hospital, Dhaka to describe their clinical presentation, management and outcome including maternal complications and mortality.

METHODS:

This descriptive study was conducted in the Department of Obstetrics & Gynaecology in Dhaka Medical College Hospital, Dhaka, Bangladesh over a period of 6 months between July 2008 to December 2008. All patients with septic abortion up to 28 weeks of gestation, admitted to the Department of Obstetrics & Gynaecology, Dhaka Medical College Hospital (DMCH) during the study period were the study population. Patients with induced septic abortion with signs of infection were included. However, patients with inevitable abortion, missed abortion, spontaneous septic abortion and septic abortion with the medical disorder were excluded from the study. A total of 50 patients based on above-mentioned eligibility criteria were included in the study. Data were analyzed using Statistical Package for Social Sciences (SPSS), version 12. The

test statistics used to analyze the data were descriptive statistics. While categorical data were expressed as frequency with corresponding percentage, the continuous data were presented as mean, standard deviation and range.

RESULTS:

Table I shows the demographic characteristics of the induced septic abortion patients admitted in the hospital. Nearly 60% of the patients were in their 3rd decade and 26% in their 4th decade of life with mean age of the patients being 27.2 ± 1.6 years. Ten percent of the patients were teen-aged and 6% were > 40 years old. In terms of educational status, 44% were primary level educated, 20% secondary and 36% were illiterate. Majority was married (96%), house-wife (82%), rural resident (76%) and belonged to poor social class (80%).

It appears from the obstetric history that 62% were in 2nd trimester of pregnancy and the rest in 1st trimester (38%). Over one-third (38%) of the patients was multipara and 30% were grand-multipara. Probing into the methods used for abortion revealed that about one-third (32%) used stick, 24% have had menstrual regulation, 14% underwent D & C, another 14% ingested drug and 8% took oral medication and another 8% could not mention any procedure. More than one-third (36%) of the patients aborted for their pregnancy was unwanted, 20% did it because their pregnancy was unplanned. A few patients however mentioned social problem (6%) and husband's illness (2%). The predominant complaints of the patients were lower abdominal pain (96%) and bleeding per vagina followed by fever (72%), discharge of foul-smelling lochia (68%) and abdominal distension (12%). On examination 96% of the patients were found pale and anemic, 56% toxic and ill-looking, 82% with raised temperature, 60% had lower abdominal tenderness, 50% dehydrated, 20% had distended abdomen and 12% developed paralytic ileus. On vulval examination 80% showed signs of bleeding and had tender fornics. Open external os, dirty vulva and foul-smelling discharge were observed in 74, 60 and 30% of the cases respectively. Vaginal and cervical injuries were found in 8 and 10% cases respectively.

In terms of complications, 40% patients experienced moderate to severe haemorrhage without shock. Hypovolemic shock, peritonitis and perforation of uterus each was encountered by 10% of the patients. At few cases developed acute renal failure (6%) and generalized peritonitis with septicemia (2%) (Table V). All patients admitted in the hospital first received conservative treatment including resuscitation; Thirty-two patients improved and cured with conservative treatment. Of the rest 18 patients who did not improve and had indications for surgery or who developed complications were treated either surgically or were referred to different departments of the same hospital (Table VI). Finally, majority (92%) of the patients improved and cured by conservative and surgical treatment. But 4(8%) expired of the disease due to generalized peritonitis (2%) and septicemia with renal failure (6%) (Table VII).

Table I. Distribution of demographic characteristics of study subjects (n = 50)

Demographic characteristics	Frequency	Percentage
Age (years)		
< 20	5	10
21 – 30	29	58
31 – 40	13	26
> 40	3	6
Educational status		
Illiterate	18	36
Primary	22	44
Secondary	10	20
Occupational status		
Housewife	41	82
Service	1	2
Others	8	16
Socioeconomic status		
Poor	40	80
Middle class	10	20
Resident		
Urban	12	24
Rural	38	76
Marital status		
Married	48	96
Unmarried	2	4

Mean age : = (27.2 ± 1.6); **range** : 11 – 19 years.

Table II. Distribution of study subjects by their obstetric history (n = 50)

Obstetric history	Frequency	Percentage
Gestational period (weeks)		
9 – 12 (1st trimester)	19	38
13 – 26 (2nd trimester)	31	62
Parity		
0 (Nullipara)	8	16
1 (Primipara)	9	18
2 – 3 (Multipara)	19	38
≥ 4 (Grand multipara)	15	30
Methods used for abortion		
Stick insertion	16	32
Menstrual regulation	12	24
Dilation & Curettage (D & C)	7	14
Ingestion of drug	7	14
Oral medication	4	8
Cannot mention procedure	4	8
Reasons for abortion		
Unplanned pregnancy	10	20
Unwanted pregnancy	18	36
Social problem	3	6
Husband bedridden	1	2
Others	10	20

Table III. Distribution of study subjects by their Clinical findings (n=50)

Clinical findings	Frequency	Percentage
Symptoms		
Fever	36	72
Lower abdominal pain	48	96
Bleeding per vagina	47	94
Discharge of foul-smelling lochia	34	68
Abdominal distention	6	12
Signs		
Pale and anemic	47	96
Toxic & ill-looking	28	56
Raised temperature	42	82
Lower abdominal tenderness	30	60
Dehydration	25	50
Abdominal distention	10	20
Paralytic ileus	6	12
Vulval examination (inspection, per vaginal and per speculum examination)		
Sign of bleeding	40	80
Tender fornics	40	80
Open external os	37	74
Dirty vulva	30	60
Foul smelling discharge	15	30
Vaginal injury	4	8
Cervical injury	5	10
Foreign body	2	4

Table IV. Distribution of patients by complications encountered (n = 50)

Complications	Frequency	Percentage
Hemorrhage (moderate to severe) without shock	20	40
Pelvic peritonitis	4	10
Hypovolumic (hemorrhagic) shock	5	10
Perforation of uterus	5	10
Generalized peritonitis with septicemia	1	2
Acute renal failure	3	6

Table V. Procedures done on non-responders to conservative treatment (n = 18)

Procedures done	Frequency	Percentage
Laparotomy	6	33.3
Oophorectomy	4	22.3
D & C	1	5.5
E & C	2	11.1
Referred by	5	27.8

Table VI. Distribution of patients outcome and cause of death (n=50)

Outcome of management	Frequency	Percentage
Outcome		
Improved & cured	46	92.0
Expired	4	8.0
Causes of Death		
Generalized peritonitis with septicemia	01	2.0
Septicemia with renal failure	3	6.0

DISCUSSION:

In the present study almost three-fifth of the patients were in their 3rd decade and 26% in their 4th decade of life with mean age of the patients being 27.2 ± 1.6 years. Over 40% were primary level educated and a sizable portion (36%) was illiterate. Consistent with findings, Pantanik et al[9] demonstrated 57.3% in the age group 21-30 years. Majority of the patients was married (96%), house-wife (82%), rural resident (76%) and belonged to poor socioeconomic class (80%), which bears consistency with the findings of several other studies. Guin and colleagues[10] found 79% married and Sharma et al.[11] found about 90% married in their studies. More than three-quarters (76%) of the patients from rural areas indicate that they don't have access to facilities of safe abortion services in

the rural area. Ahmed et al.[12] showed 71% of their respondents from rural area.

More than 60% of the patients were in their 2nd trimester of pregnancy and over two-thirds (68%) were multipara. For initiating abortion, about one-third (32%) used stick inside the vagina, 24% received menstrual regulation, 14% underwent D & C (dilatation & curettage), 22% took oral medication and the rest could not mention any procedure. More than half (56%) aborted, for their pregnancy was unwanted or unplanned. Pantanik et al.[9] showed D & C to be the commonest method of evacuation (28.6%), followed by stick insertion 19%. Other methods used were suction & evacuation (9.5%), oral medication (9.5%), cervical application of chemicals (14.3%) and intraamniotic instillation (4.8%).

The lower abdominal pain (96%) and per vaginal bleeding (94%) were the predominant complaints of the patients followed by fever (72%), discharge of foul-smelling lochia (68%) and abdominal distension (12%). On examination majority was found anemic (96%), toxic (56%), feverish (82%), tender lower abdomen (60%) dehydrated (50%), distended abdomen (20%) and paralytic ileus (12%). On local examination 80% exhibited signs of bleeding with tender fornics. Open external os, dirty vulva and foul-smelling discharge were observed in 74, 60 and 30% of the cases respectively. Vaginal and cervical injuries were rare. Sharma et al.[11] showed that most common presentation in induced septic abortion was fever (82.6%) followed by generalized peritonitis (43.5%) and pelvic peritonitis (41.4%). Rana and associates[4] in a similar study reported over half (55%) of the patients present with febrile illness, 40% with continual vaginal bleeding, 8% with foul vaginal discharge, 10% with abdominal pain. More than 90% of the patients in the present study improved and cured and 8% died of complications of the disease. The cause of death was generalized peritonitis (2%) and septicemia with renal failure (6%). Guin and colleagues[10] showed that about 16% died of complications of septic abortion, while Rana et al.[4] reported mortality rate to be 8.4%.

Thirteen (72.2%) of the 18 patients who did not respond to conservative treatment were subjected to different operative procedures and the rest 5(27.8%) were referred to different departments depending upon their ailments. Of the operative cases 5 received laparotomy, 4 have had oophorectomy, 1 underwent D&C and 2 received E & C. Guin[13] and Rana[4] also reported similar outcomes of patients who failed to respond to conservative treatment. Like any other scientific study, the present study is not without limitations. The following limitations deserve mention.

LIMITATION:

1. All necessary investigations needed for assessing patients' condition and thereby to deciding management option were not feasible to conduct, for many patients were too poor and hospital could not provide them.

2. In many cases empirical antibiotics were given.

3. As maximum patients were illiterate, it was difficult to get reliable information from them.

4. Women usually like to hide the information about interference, which may have underestimated the methods used for abortion.

CONCLUSION:

Induced septic abortion patients attended at Dhaka Medical College Hospital are generally in their 2nd trimester of pregnancy and multipara. In one-third of cases, the stimulus used to initiate abortion is stick inside the vagina, then follow menstrual regulation, D & C, oral ingestion of abortifacient drugs etc. Reasons of abortion include unwanted or unplanned pregnancy. Few cases are done for social problem and husband's illness. While the cardinal symptoms at presentation are lower abdominal pain and per vaginal bleeding followed by fever, discharge of foul-smelling lochia and abdominal distension, cardinal signs are anemia, toxic, ill-looking, raised temperature, lower abdominal tenderness and dehydration. Local examination usually exhibits signs of bleeding with tender fornics, open external os, dirty vulva and foul-smelling discharge. Vaginal

and cervical injuries are found in few cases. Majority of the patients improve and cured on conservative treatment. Some however, require operative treatment and few require to be referred to other medical disciplines depending on their nature of complications. Very few patients died of complications of the disease - generally peritonitis and septicemia with renal failure. To reduce maternal mortality and morbidity due to septic abortion, primary health care must be geared up. Knowledge about proper contraception and safe abortion in case of unwanted pregnancy on the part of the pregnant women and their decision-making family members will go a long way in reducing the incidence of morbidity and mortality due to induced septic abortion.

REFERENCES:

1. Siddiq NM, Ghazi A, Saddique M, Ali T, Jabbar S. Complications and management of unsafe abortion. *Journal of Surgery Pakistan* 2008;13(1):12-15.
2. Okonofua F. Abortion and Maternal Mortality in the Developing World. *J Obstet Gynaecol Can* 2006;28(11): 974-979.
3. Majlessi F, Forooshani AR, Shariat M. Prevalence of induced abortion and associated complications in women attending hospitals in Isfahan. *Eastern Mediterranean Health Journal* 2008;14(1):103-109.
4. Rana A, Pradhan N, Gurung G, Singh M. Induced septic abortion: A major factor in maternal mortality. *J Obstet Gynaecol Res* 2004;30(1):3- 80.
5. Stubblefield PG, Grimes DA. Septic Abortion. *The New England Journal* 1994;331:310-314.
6. John Hopkins University. Complication of abortion in developing countries. Population Report Series No-1980.
7. Vin ita D, Anjoo A, Arnita M, Preetam D. Septic abortion. *The Journal of Obstetrics and Gynaecology of India* 2006; 56(3):236-239.
8. Obaidullah M, Khan AR. Social dynamics of abortion in rural Bangladesh. *BFRP report* 1992.
9. Patnaik A, Gantayat PL, Patnaik L, Sahu T. Socio-clinical profile of septic abortion case -a hospital based study. *Journal of Community Medicine* 2007;3(1):1-7.
10. Sharma JB, Manakfala V, Kumar A, Malhotra M. Complication & management of septic abortion: A five years study. *Journal of Obst & Gyn of India* 2001;51(6): 74-76.
11. Finkielman JD, DeFeo FD, Heller PG. Afess B. The clinical course of patients with septic abortion admitted to an intensive care unit. *Intensive Care Med* 2004;30: 1097-1102.
12. Ahmed K, Rahman M, Van Ginneken J. Induce abortion in Matlab, Bangladesh : Trends & determinants. *International Family Planning Perspectives* 1998;24(3): 128-132.
13. Guin G, Gupta A, Khare S, Chandra M, Kalkur S. A study of septic abortions: trends in a tertiary hospital. *J Obstet Gynecol India* 2005;55(3):257-260.