

# Septic Abortion and Associated Morbidity and Mortality

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## Abstract

**Background:** In Bangladesh a large number of women attending the major urban hospitals with the complications directly due to abortion like, hemorrhage, fever, peritonitis, visceral injuries. Among all types of abortion, septic abortion is a significant health problem with short and long term complications that affect the quality of life of those fortunate enough to avoid mortality. **Aim:** This study was conducted to assess the septic abortion related morbidity and mortality in a tertiary level hospital in one year. **Methods:** This study was a cross sectional observational study in the Department of Obstetrics and Gynaecology, Chittagong Medical college hospital from October 2008 to September 2009, where 60 patients of septic abortions in above period were collected by history examination, management, complications and associated morbidity and mortality. **Results :** 58.3% of septic abortion patients came from lower class, 70% of them were residing in urban slum area, 96.7% were married 44% of them were illiterate, 85% of them did not use any contraceptive methods although they didn't want to increase their family. 78.3% needed surgical treatment, 23.7% needed major surgery like laparotomy, average duration of hospital stay was 12.08 days and 8.33% patients came with septicemic shock and died. **Conclusion:** Septic abortion is an important contributor to maternal morbidity and mortality, increasing the burden not only the patients but health workers and their resources.

**Key words:** Septic abortion; Morbidity; Mortality.

## INTRODUCTION

Each year an estimated 210 million women become pregnant. Worldwide more than one fourth of these pregnancies will end in abortion or an unplanned birth<sup>1</sup>. Pregnancy places a woman at some risk for illness and death. This risk may be gladly assumed with a desired pregnancy. Unwanted pregnancy places a woman at additional risk if she seeks abortion and safe services are not available<sup>2</sup>. Abortion is the termination of pregnancy by any means before the fetus is sufficiently developed to survive<sup>3</sup>. Any type of abortion when completed with infection it is called septic abortion<sup>3</sup>. Septic abortion continued to be a major health problem in developing countries where abortion is not legalized<sup>4</sup>. Here termination is mostly done by traditional birth attendants or quacks who are available in the vicinity. Once complicated, they are referred to Government hospitals as no one accepts a moribund patients. The infection can occur during or just after an abortion. The infection can result from factors like attempted abortion using infectious tools, lack of proper antiseptic and asepsis, incomplete evacuation, inadvertent injury to the genital organs and adjacent structures particularly gut<sup>5</sup>. Once interference is done infection starts as endometritis involving endometrium and any retained products of conception. If not treated, infection spreads further into myometrium and parametrium. Parametritis progress into peritonitis. The patient may develop bacteremia and sepsis at any stage of septic abortion. Pelvic inflammatory disease is the most common complication of septic abortion and delayed treatment permits the infection to progress to bacteremia, generalized peritonitis, pelvic abscess, disseminated intravascular coagulopathy, adult respiratory distress syndrome, septic shock, renal failure and death<sup>4,5,6</sup>. Present study analyzes the cases of septic abortion in a tertiary hospital to evaluate the socioeconomic and demographic precedent factors, reasons and methods used for termination, clinical features, hospital stay, complications and death with special emphasis on unmet needs of safe abortion.

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## MATERIALS AND METHODS

This was a hospital based cross sectional observational study of 60 patients who were admitted and diagnosed as septic abortion in the Department of Obstetrics and Gynecology in Chittagong Medical college hospital in one year time period between October 2008 to September 2009. A total 60 patients were admitted as emergency cases with symptoms and signs of septic abortion. Clinical data was recorded in the pre designed structured questionnaire, regarding socio-demographic factors, modes of abortion, clinical features, morbidities (in terms of surgical procedure other than E&C and D&C., cases needed prolong hospitalization, left with permanent damage like hysterectomy, tuboovarian mass, perforation of uterus, cervical and vaginal injury, acute renal failure, adult respiratory distress syndrome.)

### RESULTS

In this study most of the patients were between 21-30 years of age. Most of them were from low socio economic class 58.3%, and were residing in urban slum area 70% ,and 96.7% were married.

**Table 1:** Age groups in septic abortion (n=60)

Age in Groups	n	%
18 – 20 Years	05	8.3
21 – 30 Years	33	55.0
31 – 40 Years	22	36.7

**Table 2:** Socio-demographic factors among the study group (n = 60)

Socio-demographic factors	n	%
Socio-economic status	Lower class	35 58.3
	Lower middle class	19 31.7
	Upper Middle class	06 10.0
Habitation	Rural	17 28.3
	Urban	01 1.7
	Urban slum	42 70.0
Marital status	Married	58 96.7
	Unmarried	02 3.3

73.4% of the patients were illiterate and 78.3% were house wives, 85% of them did not use any contraceptive methods.

**Table 3:** Educational levels among the study groups (n=60)

Educational levels of the Patients	n	%
Illiterate	44	73.4
Primary	14	23.3
Secondary	02	3.3
HSC & above	00	0.0

**Table 4 :** Occupation among the study subjects (n=60)

Occupations of the Patients	n	%
House wife	47	78.3
Garments worker	07	11.7
Maid servant	04	6.7
Unemployed	02	3.3

**Table 5:** Contraceptive history among the study groups (n=60)

Contraceptive History	n	%
OCP	05	8.3
Condom	03	5.0
Injectable contraceptives	01	1.7
Nil	51	85.0

In 95% of the cases their was history of induced abortion and termination mostly done by unskilled abortionists 89.5%, reason for termination of pregnancy was not to increase the family size 71.9%.

**Table 6:** Distribution of modes of abortion among the study group (n=60)

Modes of Abortion	n	%
Spontaneous	03	5.0
Induced	57	95.0

**Table 7:** History of induced abortion (n= 57)

History of Induced Abortion	No. of Observations	Percentage (%)
Termination done by	Unskilled abortionist	51 89.5
	Medical Personnel	06 10.5
Reasons for termination	Not to increase family size	41 71.9
	Unwanted pregnancy	13 22.8
	Illegal pregnancy	02 3.5
	Divorce	01 1.8

Surgical treatment needed in 78.3% patients and major surgery that is laparotomy needed in 34.1% patients. Among them, total abdominal hysterectomy needed in 13.4% and total abdominal hysterectomy and repair and resection anastomosis of gut require in 6.7% and 3.3% of the patients, and average duration of hospital stay was 12.08 days.

**Table 8:** Surgical treatments received among the study group (n = 60)

	n	%
Surgical treatment	Received	47 78.3
	Not received	13 21.7
Among surgical treatments received	E & C	25 53.2
	D & C	05 10.6
	Laparotomy	16 34.1
	Post. colpotomy	01 2.1

**Table 9:** Laparotomy cases among the study groups (n = 60)

Laparotomy & surgical toileting followed by	n	%
Repair of uterus	02	3.3
Total abdominal hysterectomy	08	13.4
Total abdominal hysterectomy + Gut repair	04	6.7
Total abdominal hysterectomy + Resection anastomosis	02	3.3
Nil	44	73.3

**Table 10:** Total hospital stays among the study groups (n = 60)

	No. of Patients	Days		
		Mean	± SD	Range
Total Hospital Stay	60	12.08	10.65	1 – 42

In terms of complications (morbidity) 15% presented with hypovolumic shock, 11.6% generalized peritonitis with septicemia, pelvic peritonitis 25%, perforation of uterus 10%, vaginal and cervical injury 6.66%, acute renal failure 05%, tuboovarian mass 3.3%, ARDS 1.7%, septicemia with jaundice 1.7% and 8.33% patients expired in the course of treatment.

**Table 11:** Complications (morbidity) among the study groups (n = 60)

Complications	n	%
Hypovolumic shock	09	15.0
Generalized peritonitis with septicemia	07	11.6
Pelvic peritonitis	15	25.0
Perforation of uterus	06	10.0
Vaginal & cervical injury	04	6.66
Acute renal failure	03	5.0
Tubo-ovarian mass	02	3.3
ARDS	01	1.7
Septicemia with Jaundice	01	1.7
DIC	00	0.0
No major complications	12	20.0

**Table 12:** Outcomes among the study groups (n=60)

Outcomes	n	%
Improved & discharged	55	91.66
Expired	05	8.33

## DISCUSSION

This study showed septic abortion contributes more in life threatening complications in women, which usually followed induced and unsafe abortion. Overall abortion rates are similar in the developing and developed world but unsafe abortion is concentrated in developing countries. An estimated 42 million abortions were induced in 2003, and the rate was 29 per 1000 women aged 15-44 years<sup>9</sup>. Present study showed surgical treatment received by 78.33%. Another study by Naib et al (2004)<sup>4</sup> showed need of surgical treatment 99.99%. Major surgery like laparotomy needed in 34.04% followed by total abdominal hysterectomy 23.32%. Another study by Naib et al (2004)<sup>4</sup>, Das et al (2006)<sup>7</sup> found need of hysterectomy 14.28% and 13.93% respectively. So many patients of septic abortion sacrifice their obstetric future in the course of treatment. Many patients had serious complications like pelvic peritonitis 25%, generalized peritonitis with septicemia 11.6%, perforation of uterus 10%, acute renal failure 05%, tuboovarian mass 3.33%, ARDS 1.7%, septicemia with jaundice 1.7%. This study showed death due to septic abortion was 8.33%. Different study showed Naib et al (2004)<sup>4</sup> in Pakistan 7.5%, Das et al (2006)<sup>7</sup> in India 23.21%, Rana et al (2004)<sup>8</sup> in Nepal 9.7%.

## CONCLUSION

Septic abortion is a common gynaecological problem requiring hospital admission and treatment. It has serious short term and long term complications affecting women's health and life. Most of the patients need major surgery and prolong hospital stay. It will not only increase patients suffering but economic burden and work load of health personnel. This tragedy can be preventable and for this we have following recommendations: improvement of existing health services, giving adequate post abortion care, family planning services made accessible and acceptable, MR services should be freely extended and accessible, traditional abortionists should be identified and trained not to cause complications and the restrictive law of abortion of Bangladesh should be liberal.

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