

A Study of Septic Abortion

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Summary: 168 cases of septic abortion admitted over one year in a tertiary referral centre were followed prospectively. 82 % women were multiparous. Single women formed 14.8 % cases, all being nulliparous. 90.5 % cases followed illegal induced septic abortion, while 6.5 % followed MTP. Anaerobic infection was present in 17.3 % cases. Of these, 3 % cases were infected with *Clostridium Welchi*. The commonest aerobic organism isolated was *E. Coli* in 33.9 % cases. 92.3 % cases required operative interference.

The commonest longterm complication was chronic pelvic pain in 32.7 % cases. Mortality due to septic abortion was 12.5 %. 90 % cases died due to septic shock.

Steps for the prevention of the high rate of morbidity and mortality associated with septic abortion are discussed.

A Study of Septic Abortion

The Shah Committee (1971) estimated that prior to the liberalization of abortion laws, the abortion rate in India was 13 per 1000 population (5 spontaneous and 8 induced). It was also estimated that sepsis occurred in 5-20 % of all abortions and septic abortion was one of the major causes of maternal mortality in India.

More than a quarter century has passed since then, but the situation has not improved.

An attempt was made to evaluate steps for the prevention of the high rate of morbidity and mortality associated with septic abortion by analyzing these cases.

Material and method

168 cases of septic abortion admitted in the obstetrics and gynaecology department of Patna Medical College Hospital, Patna between August 1995 and July 1996 were followed prospectively. This formed 2.1 % of all obstetric admissions in this tertiary referral centre and 9.3 % of abortion admissions.

Observations

78 % patients were in the age group, 21-30 years (Table-I), more than 82 % women were multipara (Table-II)

Table I

Age distribution

Age group (Years)	No. of cases	Percentage
14-20	28	16.7
21-30	131	78.0
31-40	9	5.3
Total	168	100.0

Table II

Septic abortion in relation to parity

Parity	No. of cases	Percentage
Nullipara	30	17.9
Multipara	138	82.1
Total	168	100.0

Table III

Marital status in relation to parity

Marital status	No	Percentage	Nullipara	Multipara
Married	135	80.4	5	130
Widowed	8	4.8	-	8
Single	25	14.8	25	-
Total	168	100.0	30	138

80.4 % women were married, and of these most were multiparous, 4.8 % women were widows and these were all multiparous. Single women formed 14.8 %, all being nulliparous. (Table-III) 80.3 % were first trimester cases. (Table-IV)

90.5 % followed illegal induced abortion. 6.5 % followed MTP and 3 % developed sepsis after spontaneous

abortion. (Table-V) 64.8 % cases had grade III sepsis (Cavanagh and Rao, 1973), while grade I and II sepsis was found in 35.2 % cases (Table-VI). The cases with grade III sepsis followed criminal abortion in all cases.

Table IV
Period of gestation

Weeks of gestation	No	Percentage
8	51	30.3
9-12	84	50.0
13-16	20	12.0
17-20	13	7.7
Total	168	100.0

Table V
Type of abortion preceding sepsis

Type of abortion	Number	Percentage
Spontaneous	5	3.0
MTP	11	6.5
Criminal	152	90.5
Total	168	100.0

Table VI
Grading of sepsis in relation to type of abortion

Grade of sepsis	No. (%)	Type of abortion		
		Spont	MTP	Criminal
I	10 (6%)	5	5	-
II	49 (29.2%)	-	6	43
III	109 (64.8%)	-	-	109
Total	168 (100%)	5	11	152

Table VII
Bacteriological culture in relation to grade of sepsis

Organism	GrI	GrII	GrIII	No.	%
E Coli	8	18	31	57	33.9
Strep faecalis	-	11	21	32	19.0
Bacteroides spp	-	4	20	24	14.3
Clostridium Welchi	-	-	5	5	3.0
Staph pyogenes	-	13	8	21	12.5
Pseudomonas spp	-	2	11	13	7.6
Others	2	1	13	16	9.5
Total	10	49	109	168	100.0

Table-VIII
Management of cases

	No	Percentage
Conservative	13	7.7
D & E	19	11.3
Colpotomy	23	13.7
Laparotomy	113	67.3
Total	168	100.0

Table-IX
Laparotomy findings (113 cases)

Findings	Total
(a) Fluid in the peritoneal cavity	113
- clear	10
- thick pus	47
- thin pus	57
(b) Adhesions	87
- Flimsy	55
- dense	32
(c) Abscess	112
- Pouch of Douglas	89
- Subphrenic	18
- Bowel	5
(d) Bowel involvement	92
- Exudate	66
- Inflammation	14
- Perforation	12
(e) Uterine involvement	86
- inflammation	81
- gangrene	2
- perforation	3
(f) Tubes and Ovary	97
- Inflammation	83
- Pyosalpinx	5
- Tubo ovarian abscess	9

Anaerobic infection was present in 17.3 % cases. Of these, 3 % cases were infested with Clostridium Welchii. The commonest aerobic organism isolated was E. Coli (33.9 %), followed by strep. faecalis (19.0%) as shown in Table VII. Conservative management was done in 7.7 % cases, while 92.3 % required operative interference. Laparotomy with drainage of the peritoneal cavity was done in 67.3 % cases, as shown in table VIII.

Table-X

Post operative complications (33.5 % cases)

Complication	No	Percentage
Early: Intestinal obstruction	5	9.6
Faecal fistula	7	13.5
Wound infection	12	23.0
Late: Chronic pelvic pain	17	32.7
Amenorrhoea	11	21.2
Total	52	100.0

Table-XI

Mortality in cases of septic abortion

Mortality	No of cases	Percentage
Pre-operative	2	9.5
Post-operative	19	90.5
Total	21	100.0

Table-XII

Cause of death

Cause Of death	No	Percentage
Septic shock	12	57.1
Haemorrhagic shock	7	33.3
Hepatic failure	1	4.8
Renal failure	1	4.8
Total	21	100.0

Table IX depicts the laparotomy findings. Fluid was found in the peritoneal cavity in all cases. This was pus in 91 % cases. Adhesions were found in 77 % cases. Abscess in the pouch of Douglas was present in 79 % cases. Bowel involvement was mostly in the form of thick exudates (78.2 %). Uterus and appendages showed inflammation, in most cases. Gangrene of the uterus was found in 2 cases.

Table X shows the post operative complication in 33.5 % cases. The commonest long term complication was chronic pelvic pain (32.7 %), while the most distressing was faecal fistula (13.5 %).

The mortality due to septic abortion was 12.5 %. Two patients being managed conservatively due to poor condition, died before any interference could be undertaken. 19 patients succumbed post operatively. (Table-XI)

The cause of death is shown in Table XII. 90 % cases died due to shock, mostly septic shock. Renal failure and hepatic failure occurred in one case each.

Discussion

Data from the ICMR collaborative study on the sequelae of induced abortion showed that the majority of abortion seekers in India were married women (93.7 %), between 20 and 30 years of age (70.5 %), with one or more living children (92.4 %). In the 168 patients of septic abortion followed up, a similar trend was observed. This was also noted by Meenakshi et al (1995) in their small series.

Sepsis mostly follows criminal abortion by untrained personnel who pay no heed to aseptic precautions and often cause perforation by crude instruments. In this series, 6.5 % cases followed MTP. The data from the ICMR collaborative study 1979 indicated that only 2.5 % MTP cases developed sepsis.

Grade III sepsis was seen only in cases of criminal abortion who usually reported late and in low condition.

Conservative management was undertaken in 7.7 % cases. With the advent of powerful antibiotics, it is now safe to undertake definitive treatment early.

We commenced supportive and antibiotic therapy on admission, and criteria for intervention was.

1. If clinical signs failed to show evidence of response to conservative management within 24 hours
2. Persistence of generalized peritonitis beyond 24 hours.
3. No signs of reduction in size of the pelvic mass within 48 hours.

Meenakshi et al (1995) undertook surgical intervention in 73.3 % of their cases, with laparotomy in 60 % cases.

We resorted to colpotomy, only if the patient's condition did not permit laparotomy or there was localized pelvic abscess without any doubt of perforation. Colpotomy temporarily alleviates the septic condition but does not cure all cases.

Rubenstein et al (1976) studied 65 patients with pelvic abscess drained by colpotomy. About one third patient's required subsequent laparotomy because of residual infection.

We used povidone-iodine solutions for intraoperative lavage. As well as being an excellent antiseptic, there is evidence that it may help in prevention of adhesions in patients with intraperitoneal sepsis (Gilmore, 1976). It must be stressed that the use of antiseptic and antibiotic solutions is no substitute for adequate exposure and cleaning of the affected area.

Gut injury was present in 12 cases (4.7%). Kreles (1996) reported that 9% cases of intestinal injury during gynaecological operation occurred during D & C. This emphasizes the need for residents to learn gut repair.

The mortality from septic abortion was found to be an appalling 12.5%, although Hira Lal (1992) found a mortality of 6.2%. When abortion laws were liberalized, it was thought that women who would have sought illegal abortion at the risk of their life would now take advantage of the existing provision. The reason for the continued high prevalence of septic abortion cases in hospitals, is probably due to legal abortion not being readily accessible to many women, who tend to go to illegal abortionist.

Family welfare services require to be strengthened, and misuse of MTP as a method of spacing needs to be discouraged. More facilities for legal abortion should be available in the rural areas, since women may not have the time or the means to travel to a distant public facility, forcing them to undergo a traditional procedure locally, with its inherent hazards.

Conclusion:

Unsafe abortion leading to sepsis still takes a heavy toll of life in the prime reproductive period.

Extensive training requires to be provided to medical personnel for delivering MTP services in the early first trimester including training for treatment of complications.

There is also an urgent need to examine the quality of services provided by the private sector and organize training camps, since they constitute the most important providers of abortion services in this country.

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