

## A COMPARATIVE STUDY OF SEPSIS AS A COMPLICATION OF M.T.P. AND INDUCED ABORTION

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Septic abortion is still an important cause of maternal death after legal and illegal abortion. It is a problem of great medico-social importance, particularly in a developing country like ours. It is a public health problem and is associated with a high maternal mortality and morbidity.

As compared to medical termination of pregnancy done under ideal conditions with all aseptic and antiseptic care, induced abortion results in a high incidence of complication and terminates in a high maternal morbidity and mortality.

The study was conducted in Bhagalpur Medical College Hospital from April, 1976 through April, 1977 to evaluate the complications of sepsis associated with medical termination in hospital group and cases of septic induced abortions admitted to this hospital. With the liberalisation of abortion laws there has been tremendous increase in the number of abortions in our country but the relative fall in septic abortion has not been studied.

### *Material and Methods*

In Bhagalpur Medical College Hospital number of deliveries were 1949 out of

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2909 obstetrical admissions from April 1976 through April 1977 (67%). Number of abortions was 476 (16.4%). The number of septic abortions was 60 (12.6%) of all the abortion cases.

Seventy per cent of septic abortion gave history of induction and the remaining denied any interference, though 6 of them died due to severe sepsis.

This analysis has been carried out on the basis of age, parity, marital status, duration of gestation and the mode of interference leading to sepsis. The morbidity and mortality resulting from this condition and management have also been discussed.

The septic abortion in this series were graded clinically as follows:

Type-I: Where the infection was confined to the endometrium and the uterus.

Type-II: Where the infection had spread beyond the uterus and it had involved the adnexa, pelvic cellular tissue and the pelvic peritoneum.

Type-III: Cases with fulminant infection involving the general peritoneal cavity, septicaemia, pyaemic endotoxic shock, jaundice, haematuria renal failure, tetanus and Clostridial infection were included in this group.

### *Observations*

Teenagers constituted 18.33% of septic abortion, patients in the age group 20-29

TABLE I  
Grade of Infection

Type of abortion	Type of septic abortion	With history of induction	Without history of induction
Type—I	61.66%	58.5%	42.4%
Type—II	18.33%	81.3%	19.8%
Type—III	20%	58%	42%

years were 40.11% and in the age group 30-39 years 28.33%, 30 years, in those above 13.33%.

As far as gravidity is concerned, no gravida is bar from this complication. An analysis of the parity of these patients revealed that 43.33% were grand-multiparous. The nulliparous accounted for only 10% of cases, the primiparous were 15% and remaining 31.66% were 2nd, 3rd and 4th paras. Thus, majority of septic abortions was found in women between 30 and 40 years and having 3 or more children.

Many of the women gave history of previous spontaneous or induced abortion. Pregnancies out of wedlock prompted 13 women (21.44%) to seek the abortionist among whom 6 were unmarried girls. The remaining were all married women who resorted to criminal interference because of socio-economic reasons.

*Mode of Interference:* Medical termination was carried out in 4 cases out of 60 cases (6.67%). Two M.T.P. were done in Bhagalpur Medical College Hospital and 2 in some private nursing home.

Though seventy per cent of the patients gave history of interference; yet at the same time, one does not know how many of the remaining patients who denied the history also had some interference.

*Complications:* To label a patient as a case of septic abortion the presence of local sepsis with pregnancy is a must. More than half the cases came with mild pain in abdomen with foul smelling dis-

charge per vaginum, irregular fever and malaise. They fall in the group of type-I in clinical grading. In rest of the patients complications were more serious like peritonitis cellulitis, endotoxic shock etc.

Out of 60 cases of septic abortion 6 or 10% died. All were admitted moribund. Rest of the patients showed following complication as shown in Table II.

TABLE II  
Complications

	Number
Pelvic peritonitis	6
Pelvic abscess	1
Tubo-ovarian mass	3
Pelvic cellulitis	1
Endotoxic shock	6
Renal Failure	2
Jaundice, haematuria	1
Tetanus	2

TABLE III  
Method of Induction

	Number	Percentage
Sticks	21	35%
Instrumental dilatation	7	11.66%
Foetex paste injection	5	8.33%
Plastic catheters	2	3.33%
Soap solution	1	1.66%
Oral Medicaments:		
(a) indigenous drugs	3	5%
(b) injection of ergo-metrim or pitocin	3	5%
Denying induction	18	30%

### Treatment and Result

The patients were treated conservatively with antibiotics and antisera (tetanus or gas gangrene). In cases of peritonitis gastric suction, drainage and intravenous fluids, cortisone and vasoconstrictors were used to combat septic shock. Blood transfusion was given where there was anaemia or jaundice or associated blood loss. If the cervix was open and there was profuse bleeding conceptus was removed with digital exploration, but curettage was done only after the infection was controlled and under cover of higher antibiotics.

Digital exploration was done in 14 cases (23.33%), instrumental evacuation in 17 cases (28.3%), hysterectomy in 1 case and hysterotomy in 2 cases who were bleeding profusely and size of the uterus was about 18 weeks. Laparotomy was done in 2 cases out of which 1 case was misdiagnosed as ectopic as patient and her attendant denied any history of interference. On laparotomy, both the tubes were gangrenous. In this case subtotal hysterectomy with bilateral salpingoophorectomy was done. Patient's condition in this case did not permit us to do total hysterectomy. In the other case where suction evacuation was performed uterus was found perforated. Omentum was lacerated too. It was repaired.

Patients with pelvic cellulitis, pelvic abscess and tubo-ovarian masses were treated with antibiotics, antisera and antiinflammatory group of drugs and some cases responded well with non-specific drug like Placentrex.

### Discussion

In order to discuss septic abortion, it is important to define it. It is an abortion in which the endometrial cavity or its contents or both are infected by some means.

The infection might subsequently spread to the surrounding structures.

According to Brain Little (1967) infection might result from the lowered resistance of the host, virulent organisms and the presence of an unusually large number of bacteria. Any of these in an apparently simple case of septic abortion could lead to severe complications if unsuspected. Patients belonging to a low socio-economic status are the ones who suffer from severe infections and these are the ones who attend this hospital.

The reported incidence of renal failure in obstetrics varies from 1 in 1400 Knapp and Hellmenn (1959) to 1 in 5000 Kerr and Elliote (1963) indicating that it is an uncommon complication. But incidence of renal failure observed and treated by Issac and Hemlatha (1976) was 1 in 553 which is much higher than the reported incidence in other countries. In our series it is 1 in 478 abortion cases admitted in this hospital. It is particularly noted in cases of abortions induced by Foetex paste.

The problem which causes interest and controversy is that of management. This includes use of antibiotics, vasopressors and corticosteroids.

When to do a curettage is certainly open to question. Stevenson (1966), Donald (1969), Purandare (1967) and Moore (1966) believe that control of infection prior to curettage is a must and the patient must be afebrile for 12-24 hours prior to evacuation. It is done immediately only when there is an uncontrollable haemorrhage. On the other hand, Fitzgibbon (1947), Stallworthy and Carston (1947) believe in aggressive treatment. Achari and Khanam (1965) found early curettage controlled infection with less morbidity and shorter stay in hospital. Ramsay

*et al* (1955) however advocate a conservative policy and in their series only 8% needed evacuation. Burnett (1952) however found exacerbation in 50% in Type I, if curettage was done while the patient was febrile and out of these 13.2% infection spread. In our series, in 23.3% cases digital exploration was done and later on curettage was done when patients became afebrile under cover of antibiotics.

Thus conservative policy is better in our opinion as Ramsay *et al* (1955) and Burnett (1952) and others have advocated. Type II patients treated conservatively gave good results. Goodno *et al* (1965) Browne and Browne (1964) also waited till signs of pelvic peritonitis subsided.

Thus conservative line certainly seems to give better results except when haemorrhage or drainage of pus indicates a surgical management.

Majority of patients who attended the hospital after interference by paramedical personnel came as septic abortion of different grades. In these instances causative organism was *B coli* in majority of cases. Anaerobic streptococci and *Clostridium Welchii* infection was present in 1 case.

Occasionally in septic abortion there may be an additional complication of blood clotting defect. In our series 1 patient developed haematuria, hepatitis and jaundice with purpuric rashes on the second day of abortion. This patient gave history of induced abortion by some herbal preparation. This may be presumably due to proteolytic substance which leads to hypofibrinogenaemia. Endotoxic shock is another serious complication. Mortality in these cases is very high in spite of recent improvement in patient care. Out of 6 patients of endotoxic shock, 2 died. Mortality rate due to this compli-

cation is 11% to 82% according to Baxi *et al* (1971).

Renal failure and oliguria are known complications of septic abortion which might result from hypovolaemia, septic shock or toxicity of the abortifacient. It was found in 2 cases in this series.

#### Summary

1. During one year period from April 1976 to April 1977, 60 septic abortion cases (forming 12.6% of all abortion or 2.06% of all obstetrical admissions) were admitted for treatment in Bhagalpur Medical College Hospital, Bhagalpur.

2. Most of them were married. 43.33% were grand-multiparae and 10% were nulliparae. Most of them were 30 to 40 years of age having 3 or more children.

3. Sepsis occurred in 4 patients (6.6%) where M.T.P. was done by medical personnel and 38 patients (63.3%) came with sepsis where abortion was induced outside the hospital by paramedical personnel. 18 patients (30%) did not give any history of induction.

4. The favourite methods of induction were by insertion of stick and by instrumental dilatation. Some cases were induced by Foetex paste and few by oral medicaments.

5. Surgical interference after antibiotics cover for 24-48 hours in the presence of sepsis seems to give better result.

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