

## MATERNAL MORTALITY IN SEPTIC ABORTION

by

V. MATHUR,\* M.S.

and

P. ROHATAGI,\*\* M.S., D.G.O.

Abortions, whether spontaneous or induced, in the hands of unskilled and at times skilled persons are almost always fraught with hazards resulting in maternal morbidity and not infrequently mortality.

Septic abortion is still an important cause of maternal deaths after legal and illegal abortion.

Thus maternal mortality due to septic abortion may be defined as the number of deaths per 1000 live births.

With the advances in Medical Sciences, the incidence of maternal deaths has shown a considerable decline. The mortality from abortions is a controversial subject. Illegal abortions are widely believed to be associated with very high maternal mortality.

In India the mortality rate is reported

to be 7.8 per 1000 random abortions as compared to the figures of 0.66/1000 abortions done under the M.T.P. ACT, 1971. This is because most of the random abortions are illegally performed. Maternal mortality in our hospital is 10.24/1000 live births. Maternal mortality due to septic abortion was 1.17/1000 live births over a period of 4½ years.

A survey was conducted in our hospital from January 1975 to July 1979 to evaluate cases of septic abortion and its complications and hence to correctly evaluate the incidence of maternal mortality.

This analysis has been carried out on the basis of age, parity, marital status, and mode of interference leading to sepsis.

*Following is the Data*

*Following is the Data:*

Year and month	Total No. of indoor patients	M. Mortality	No. of septic abortion cases	M. Mortality due to septic abortion
January 1975	6581	49	30	4
" 1976	8991	46	18	3
" 1977	6581	70	28	8
" 1978	5258	65	19	7
July 1979	2779	59	35	11

Reader\*

\*\*Professor and Head of Department.

Department of Obstetrics and Gynaecology,  
G.S.V.M. Medical College, Kanpur.

Accepted for publication on 30-11-79.

A 4½ year study in this hospital shows that of the total number of 28190 patients admitted there were 130 cases of septic abortion and 33 deaths occurred due to septic abortion. All the

cases admitted as septic abortion were from outside, and there was no case of septic abortion recorded after planned M.T.P. in our Hospital. 40% cases of septic abortion admitted gave a history of induction by sticks, sharp instruments, medicated swabs indigenous drugs, and also a few cases of M.T.P. done by unskilled personnel. The remainder denied any interference. Higher incidence of maternal mortality has been seen in 1977, 1978 and 1979, this is explained by the fact that more and more patients are now hospital conscious, and are coming for treatment after interference. Formerly such patients died at home and so these cases went unrecorded. It can be seen that there has not really been a decline in the cases of septic abortion, even after the implementation of the Act, 1971, as a large number of patients still prefer to get the abortion induced in real secrecy and only register in hospital when complications arise.

Parity revealed that 75% were grand multipara, 52% primipara, 18% 2nd, 3rd and 4th para, 10% and were nulliparous. Most of these women were between the age group of 16 to 35 years. Almost 60% cases of septic abortions were admitted moribund.

#### Cause of Death

##### Cause of Death

	No. of deaths	% of deaths
1. Pelvic peritonitis and cellulitis	19	57.58
2. Gangrenous bowel and perforation of uterus seen after surgery	3	9.09
3. Endotoxic shock	2	6.06
4. Septic and pulmonary embolism	2	6.06
5. Renal failure	2	6.06
6. Encephalitis	1	3.03

	No. of deaths	% of deaths
7. Tetanus	Nil	—
8. Associated diseases		
(a) Severe anaemia	2	6.06
(b) Associated Carcinoma cervix	1	3.03
(c) Hepatic Coma	1	3.03
Total	33	

To label a patient as a case of septic abortion the presence of local sepsis is a must. The most common cause of death in septic abortion is septicaemia with shock. Rarer causes are tetanus and hypofibrinoginaemia. Septic shock should be suspected when the patient gives a history of criminal interference, and collapse heralded by high spiking fever, foul smelling discharge or vaginal bleeding signs and symptoms of shock, and signs and symptoms of pelvic peritonitis. After taking a careful history and examination of the patient on admission, as a routine the following investigations were done in this hospital.

1. Blood—Haemoglobin, total and differential leucocyte count, blood film, bleeding and clotting time, ABO and Rh grouping and cross matching, blood urea, blood culture, serum electrolytes.

2. Urine—Specific gravity, albumin, sugar, microscopy, urine culture and sensitivity.

3. High vaginal swab—for culture and sensitivity of the organism.

#### Management

The problem of interest and controversy is that of management. The conservative therapy is preferred in our hospital, unless there is (1) severe haemorrhage, (2) drainage of pus (3) perforation of the uterus, and (4) Injury to the other viscera in the vicinity of the uterus, when

surgical intervention is carried out. Most of our patients were treated with I/V fluids, antibiotics, antisera (Tetanus) and (Gas Gangrene), gastric suction and Ryles tube drainage, Intake and Output chart was maintained, Measurement of abdominal girth in cases of peritonitis, corticosteroids and vasopressor drugs to combat shock. Blood transfusion is an extremely essential part of the treatment to overcome the septicaemia. If the cervix is open and there is profuse vaginal bleeding, the conceptus is removed with digital exploration only. Curettage is done only later, when bacteraemia is under control, with very good antibiotic cover, after at least the patient is afebrile for 24 to 48 hours before evacuation. Operative treatment is done by way of culdotomy, to drain the pus and also laparotomy is resorted to, with resection and anastomosis, in cases of gangrenous bowel and perforation of the uterus, where hysterectomy is favoured and some times a salpingo-oophorectomy is done to completely remove the septic foci from the pelvis. Patients with pelvic cellulitis and tubo-ovarian masses, are treated conservatively with antibiotics, antisera, and anti-inflammatory group of drugs. A good response was seen with placentrex and Pelvic diathermy.

#### Discussion

Infection might result from lowered resistance of the host, virulent organisms, and the presence of unusually large number of bacteria. The most common organisms present which may lead to septic shock are *E. Coli*, *B. Proteus* and *Pseudomonas*, Anaerobic streptococci, clostridia, *welchii*. A large number of patients admitted after interference from elsewhere, had the presence of one of these causative organisms on high vaginal Swab culture.

Endotoxic shock occurs in 2-6% of abortions with a mortality varying from 50-70% depending upon the severity of the sepsis and renal impairment. It is extremely important to detect the shock at an early phase, when the patient is normovolaemic. Once the patient goes into hypovolaemic shock with peripheral circulatory failure, and associated endotoxic shock with renal failure, there are more enhanced chances for mortality to occur. Mortality due to this is 11-82% according (Baxi). Bhaskar Rao and Malika (1977) reported that septic abortion is responsible for 1 out of 4 deaths due to obstetric causes. Konar *et al* (1973) reported that 11% deaths in criminal abortions were due to septicaemia, 10% due to peritonitis and 9%, due to renal failure. Patharajah and Parvathamma (1975) report maternal mortality rate of 13.54/1000. Sepsis being the dominant cause of death due to abortion, where 75% of abortions are carried out by untrained Dais. Reports from all over the country show that 20 to 25% of all maternal deaths are due to septic abortion and one of its sequelae.

The maternal morbidity and mortality reflects not only an inadequacy of health care services for the mother, but also a low standard of living and socio-economic status of the community. The concept of "social obstetrics" has gained popularity during the past two decades. It is concerned with the delivery of comprehensive maternity and child health care services, including Family Planning. In order to prevent these mortalities the present M.T.P. services should be reappraised, and adequate knowledge in family welfare to these women should be emphasised. Adequate training should be provided to the medical and paramedical personnel. Maintenance of proper asepse in Family Planning Centres and Clinics and facili-

ties available should be improved upon.

M.R. should be advocated to reduce deaths due to septic abortion. Repeated abortions should be discouraged and other Family Planning measures advocated.

There is really no diagnostic way of finding out the number of abortions a woman has undergone. One of our most eminent gynaecologists in the country has very humourously remarked, that if a bead is attached to the cervix each time she comes for a termination, there could be some hope of finding out the number.

A team of professionals, comprising of a gynaecologist and an obstetrician, social worker and paramedical staff with a good insight into human behaviour should all

work closely and endeavour to reduce maternal mortality.

#### *Acknowledgement*

A vote of thanks to Dr. N. Ahmed (Postgraduate Student) Dr. R. Pahwa (Resident in Department of Obstet. & Gynaec.) and Dr. S. David (Postgraduate student) for their help in collection of the data.

#### *References*

1. Boxi, V., Nerurkar, A. S., D'Souza, M. and Purandare, V. N.: J. Obstet. Gynaec. India. 21: 655, 1971.
2. Konar, M., Saha, K. and Lahiri, D.: J. Obstet. Gynaec. India. 23: 436, 1973.
3. Patharajarah, M. P. and Parvathamma: J. Obstet. Gynaec. India. 25: 665, 1975.
4. Rao, B. K. and Malika, P. E.: J. Obstet. Gynec. India. 27: 876, 1977.