

Maternal Mortality from septic abortions in University Hospital, Kuala Lumpur from March 1968 to February 1974

by

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In spite of the advances made in medicine in general and in obstetrics and gynaecology in particular, maternal deaths from abortions continue to be a leading cause of maternal mortality in many countries. In the most recent report of the confidential enquiries into maternal deaths in England and Wales, abortion remains the commonest cause of maternal deaths (1). As the number of maternal deaths from all causes has fallen, abortion has become even more important as a major cause of death. In the University Hospital, Kuala Lumpur, during the six-year period from March 1968 to February 1974, there were 1699 admissions from abortions with 4 deaths, while the total maternal deaths from all causes was 13. The mortality rate from abortion during this period was 0.241 per 1000 pregnancies.

The number of abortion cases admitted into the hospital during the six-year period of this study has increased steadily. In 1969, 205 cases of abortion were admitted while in 1973, this number has more than doubled to 448 admissions from abortion (Table 1). It will be of interest to review briefly the 4 maternal deaths from abortion and outline the avoidable causes and preventive aspects.

CASE REPORTS

Case 1 A 21 year old primigravida was admitted on 5.5.69 with septicaemic shock from septic abortion. She gave a history of 10 weeks amenorrhoea and induced abortion 2 days prior to admission. Her condition improved initially but deteriorated on the following day. She developed pulmonary oedema, renal failure and repeated cardiac arrests, and died during an attack of cardiac arrest. Cause of death was septic abortion leading to septicaemic shock, renal failure and cardiac arrest.

Case 2. A 28 year old gravida 7, unbooked patient was admitted on 26.6.72 with vaginal haemorrhage and hyperpyrexia after about 26 weeks amenorrhoea. She subsequently aborted the foetus, went into a state of profound shock, and died from cardiac arrest. Autopsy confirmed death from septicaemia following septic abortion.

Case 3. A 20 year old gravida 3, para 2 was admitted on 5.6.73 with threatened abortion after a history of 11 weeks amenorrhoea. Evidence of sepsis was apparent 3 days later when she had fever and a purulent vaginal discharge. She was put on intramuscular penicillin and streptomycin. Her

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condition deteriorated when she had vaginal haemorrhage and shock and she died following an attack of cardiac arrest. Autopsy showed evidence of septicæmia, disseminated intravascular coagulation, and thrombosis in the superior sagittal sinus and cerebral veins.

Case 4. A 38 year old gravida 6, para 5 was seen by a general practitioner on 5.1.74 and diagnosed as having missed abortion, the same doctor having seen her a month previously in his clinic and she was said to be pregnant without any complication then. She saw the doctor again on 7.1.74 when she was found to have a fever and foul-smelling vaginal discharge. She was admitted to a private hospital, put on antibiotics and induced with an intravenous pitocin drip. After aborting the fetus, she had retained placenta which was removed manually under general anaesthesia. She was in shock 2 hours later. She improved initially with intravenous fluids, plasma and blood. Next morning she was noticed to be jaundiced and hypotensive again, and she was transferred to the Intensive Care Unit of the University Hospital on 9.1.74. She was put on positive pressure ventilation, antibiotics, plasma expanders, isoprel and phenoxybenzamine drip. There was slight improvement but she was noticed to have generalised bleeding. Six hours after admission she suddenly had a cardiac arrest and failed to respond to attempts at resuscitation.

DISCUSSION

The number of abortion cases admitted to the University Hospital during the period of study has shown a steady increase. This is probably also the experience in most major hospitals in West Malaysia and is due to an influx of rural population into urban areas coupled with the shortage of housing and the stresses associated with this change in environment. The rapid increase in number of factories and industries around the urban areas may be a major cause in the sudden increase in the number of abortions admitted to hospitals while the number of deliveries in the same hospitals have only shown a small increase during the same period (Table 1).

Of the four abortion deaths, 3 patients admitted to attempts at inducing abortion while in the remaining patient (Case 3) induced abortion was denied by the patient although her husband thought it could have taken place. Nevertheless, all 4 cases of abortion deaths occurred in patients with septic

abortions and were therefore, theoretically, avoidable deaths. Hence the importance of preventive aspects of maternal deaths from abortion.

Webster (2) in a survey of maternal deaths stated that poverty, with all its attending evils, was the major factor in maternal mortality rather than race. Poverty was often associated with poor education, lack of motivation, and ignorance of the value of medical and health care. Klein and Karten (3) also reiterated that socio-economic status was a potent force affecting the patient's attitude to health and the outcome of pregnancy. Hence improvement of socio-economic status and health education of the people on the importance of medical care and the danger of induced abortion are important factors in the prevention of maternal mortality.

An effective family planning programme plays an important role in reducing maternal mortality from abortions as unwanted pregnancies are prevented. Again high motivation among doctors, nurses and patients is important for the success of any type of family planning project. Recent advances in technology of contraception, male and female sterilisation should be incorporated in these programmes. Techniques of contraception or sterilisation should be safe, simple, effective, inexpensive and suitable for adoption for the masses. When any further pregnancy would affect the physical or mental health of a patient, an effective method of sterilisation should be offered.

The question of whether liberalized abortion would reduce maternal deaths is a difficult one to answer as it does not provide a complete answer to this complex problem of abortion. It would certainly reduce the number of septic abortions and deaths from endotoxic shock. Initial experience in England and Wales after the introduction of the Abortion Act 1967 from 27 April, 1968 has shown a slight reduction in deaths from abortion, although the number of deaths from legalized abortion has increased (1). In a two-year study, from July 1970 to June 1972, of deaths from abortion in New York City following liberalization of the law, the reduction in maternal deaths was impressive (4). However, the mortality rate from abortion after 12 weeks gestation was 17.7 deaths per 100,000 compared to the rate of 1.2 per 100,000 for the early terminations. Therefore patients and doctors should be aware of the considerably increased risks of late terminations.

TABLE I
NUMBER OF ABORTIONS AND DELIVERIES PER YEAR

<u>YEAR</u>	<u>ABORTIONS</u>	<u>DELIVERIES</u>
March–December 1968	71	1224
1969	205	2464
1970	222	2466
1971	338	2438
1972	341	2725
1973	448	3047
January–February 1974	74	517
TOTAL	1699	14879

Prevention of sepsis in a case of abortion is most important. All patients with complications such as haemorrhage or sepsis should be referred to hospitals or clinics with facilities for dealing effectively with such complications. Any suspicion or evidence of sepsis in a case of abortion should be thoroughly investigated so that septic abortions are diagnosed early and antibiotic therapy commenced without any delay. Delay in instituting antibiotic therapy may allow the condition to be established and septicaemia to occur.

Endotoxic shock requires aggressive therapy. Intravenous steroids in pharmacological doses every 4 to 6 hours are often given to patients with endotoxic shock. In cases of hypovolaemic shock intravenous fluids may be administered rapidly with little risk, provided there is central venous pressure monitoring. The blood pressure should be maintained, and in cases of low cardiac output with high peripheral resistance, adrenergic drugs like isoproterenol and phenoxybenzamine are useful (5). Pulmonary support may be necessary in cases of respiratory failure, and a close watch should be maintained on renal function, cardiac function, metabolic and haemostatic complications. In cases complicated by the defibrination syndrome and there is evidence that the stimulus to clotting is still in operation, intravenous heparin appears to be of benefit, but it must be administered with caution (6). Blood should be taken for bacterial culture as soon as possible, and the patient started on an appropriate antibiotic or antibiotic combination early. With intensive care and careful choice of drug therapy, the number of deaths from endotoxic shock may be reduced.

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REFERENCES

1. Arthure, H., Tomkinson, J., Organe, G. et al. Report on Confidential Enquiries into Maternal Deaths in England and Wales, 1967–1969. London, Her Majesty's Stationary Office, 1972, p. 39.
2. Webster, A. (1968). *Am. J. Obstet. Gynecol.* 101: 244–253.
3. Klein, M.D. and Karten, I. (1971). *Am. J. Obstet. Gynecol.* 111: 298–303.
4. Pakter, J., O'Hare, D., Helpers, M. and Nelson, F. (1973). *Bull. New York Acad. Med.* 49: 804–818.
5. Thal, A.P., Brown, E.B., Hermreck, A.S. and Bell, H.H. *Shock – a Physiologic Basis for Treatment.* Chicago, Year Book Medical Publishers, Inc., 1971, p. 287.
6. Thal, A.P., Brown, E.B., Hemreck, A.S. and Bell, H.H. *Shock – a Physiologic Basis for Treatment.* Chicago, Year Book Medical Publishers, Inc., 1971, p. 62.