

CLINICAL STUDY OF MATERNAL DEATHS DUE TO HAEMORRHAGE AT SHETH CHINAI MATERNITY HOSPITAL

(Review of Years 1964-67)

by

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The transcendent objective of obstetrics is that every pregnancy culminates in a healthy mother and a healthy baby. It strives to reduce to a minimum, the number of women who die during reproduction. The aim of this paper is to analyse the clinical data of maternal deaths as a direct result of haemorrhage. It has been pointed out that so often the patients were admitted in such a moribund and grossly exsanguinated state that efforts at resuscitation were unavailing. A maternal death is considered to be any death due to or associated with pregnancy, labour and puerperium.

Material and Method

During this 4 year period of 1964-67, the total number of deliveries

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were 22,891. Total live births were 21,465. Still births were 1,426. Deaths due to obstetric causes were 114 and due to associated diseases including anaesthesia were 80.

Maternal death rate (excluding associated disease) comes to 53.1/10,000 live births.

Maternal death rate (including associated disease) came to be 90.2/10,000 live births.

Forty-seven patients died directly as a result of haemorrhage. This constituted 25.1% of total maternal deaths and 40.6% or 2/5th of obstetric deaths.

Observations

Postpartum haemorrhage was a major cause of death, occurring in 36.2% of cases. If we exclude cases of abortion, ectopic pregnancy and vesicular mole, post partum haemorrhage constituted 44.7% of maternal deaths. (Table I).

85% were emergency admissions, 15% were registered cases. 55.48% were admitted from rural area and 44.52% were admitted from the city proper.

TABLE I
Clinical causes of haemorrhage

Condition	No. of cases	Percentage
Abortion, ectopic & vesicular mole	9	19.28%
Placenta praevia	10	21.2%
Accidental haemorrhage	4	8.48%
Ruptured uterus	7	14.84%
Post-partum haemorrhage	17	36.2%
Total	47	

93.28% patients were Hindus and 6.72% were Mahomedans. The socio-economic class of 63.96% was middle, and of 36.04% poor.

93.28% women were above the age of 24 years. Parity 4 and above was found in 80.56% of women. Amongst them 63.9% of patients had parity 4 and 6 and 16.6% had parity above 6.

All deaths resulting from ruptured uterus and accidental haemorrhage were in parity 4 and above. Only 20% of postpartum haemorrhage patients and 11.7% of placenta praevia cases belonged to 1st to 3rd parity. The age of the women was 25 years or above in every case of placenta praevia, postpartum haemorrhage and ruptured uterus.

Within 24 hours of admission 85% of the women died, while 15% died on the next day or within 7 days. (Table II).

TABLE II
Time interval between admission and death

Hours	No. of cases	Percentage
Within 24 hours	40	85%
Within 24 to 72 hours	4	
4th day to 7th day	3	

In registered cases, 3, i.e. 43% of deaths, occurred because of postpartum haemorrhage.

In 76.5% (approximately) of cases death was due to irreversible shock because of acute internal or external blood loss. 14.84% of cases the patients died because of shock associated with haemorrhage and hypofibrinogenaemia. 6.36% of cases died of uraemia developing after profuse haemorrhage.

Discussion

Haemorrhage in obstetrics constitutes still a major factor in maternal mortality. Most of the time it is sudden and profuse. Spontaneous haemorrhage occurs from maternal sinuses in atonic postpartum haemorrhage, placenta praevia, accidental haemorrhage, trophoblastic tumours and ectopic pregnancy. Traumatic haemorrhage is a result of mismanaged unskillful obstetrics. Lately, hypofibrinogenaemia is diagnosed by the simple Weiner's clot retraction test or fibrinogen estimation.

TABLE III
Haemorrhage as a cause of Maternal death

Name of Author	Year of publication	Percentage
Green	1966	18.8%
Ohio State Medical Association Reprint	1967	26.9%
Ruppersberg	1957	25.6%
Present Series	1969	25.1%
Total		96.4%
Average		24%

The incidence of maternal death directly due to haemorrhage as shown in Table 3 is from 18.5% to 25.6%. In the present study it constitutes 25.1% of maternal deaths. This suggests that haemorrhage still remains a major contributory factor of maternal deaths in other countries too.

Proper antenatal care reduces the mishaps of obstructed labour and helps in improvement in the general condition of the patient. 85% of cases in this series who died were unregistered. 44.52% of women were staying in the city proper and were admitted as emergency cases and had no proper antenatal care. This indicates wide-spread stressing on the mind of the women of the need of antenatal care.

In poor socio-economic classes, anaemia and malnutrition are more prevalent and thus the natural resistance to fight stress are at a minimum. In Jhirad's series (1955), 82.55% of maternal deaths belonged to the poor class. 36% of the present haemorrhagic deaths were in the poor socio-economic class. The obstetric hazards leading to maternal death in the middle and poor socio-economic class did not differ much in this series.

Clinical causes of haemorrhage leading to maternal death were found frequent in the latter half of pregnancy, constituting 90.72%. In them post-partum haemorrhage is a major factor. Wrigley (1957), in his series which excluded abortion, reported the incidence of post-partum haemorrhage to be 50.3%, and that of accidental haemorrhage 48.5%. If, from the present series, we exclude haemorrhage of early pregnancy (abortion, ectopic and vesicular mole) post-partum haemorrhage constitutes 44.7% and ante-partum haemorrhage 36.8% of the causes leading to haemorrhage and death. In post-partum haemorrhage and ante-partum haemorrhage mostly the "live ligature" mechanism of the myometrium fails. Post-partum

haemorrhage associated with atony, in placenta praevia the bleeding from the flabby lower uterine segment and in accidental haemorrhage over stretching of the myometrium and couvelaire uterus are some of the factors causing profuse haemorrhage. 80% of cases of post-partum haemorrhage had parity 4 and above, suggesting the prevalent role of atony as parity advances. Retained placenta was found in 23.5% of our series and 24.06% of cases in Wrigley's series.

In the Ohio State report (1967) ruptured uterus as a cause of haemorrhagic death was found in 30.5% and in 14.84% (including abortions) in our series. It was found that all deaths due to ruptured uterus were in parity 4 and above and age 25 or above. With increasing parity malpresentation of the foetus is common and at times a multiparous flabby uterus is not able to stand the distension caused by the enlarging foetus leading to spontaneous rupture of the uterus. Green (1966) pointed out that the risk of haemorrhage was greater with increasing age and parity. According to Eastman (1940), parity above 6 had a high maternal mortality due to placenta praevia and ruptured uterus.

In most cases the women were admitted in a severe state of oligoemia and efforts at reviving them after several blood transfusions were unsuccessful. 85% of women died within 24 hours of admission. Fitzgerald and Webster (1953) reported that 50% of deaths due to haemorrhage occurred in less than 8 hours of hospitalisation.

Haemorrhage leads to severe

oligaemia followed by central and subsequently peripheral circulatory failure. At times, even if the patients regain circulatory loss, irreversible damage has occurred in the kidneys and women die of oliguria. In 78.5% of our cases, irreversible shock due to acute blood loss was present. In 14.84% of cases shock and haemorrhage were associated with hypofibrinogenaemia. Because of the lack of availability of fibrinogen these cases could not be saved. As an artificial kidney unit was not available 6.36% of cases died of uraemia. One death in a case of secondary abdominal pregnancy was thought unavoidable as the placenta was attached to big vessels and spontaneous separation occurred leading to profuse haemorrhage. Green (1966) reported avoidable factors in 9 out of 12 cases, i.e. in 75%.

In conclusion, we can say that reduction of the maternal mortality rate due to haemorrhage, can be made if antenatal care becomes widespread, flying squad facilities are there and fibrinogen and artificial kidney units are available.

Summary

(i) A 4-year survey of maternal deaths at Chinai Maternity Home

showed that 25% of maternal deaths were as a direct result of haemorrhage. Post-partum haemorrhage heads the list of haemorrhagic deaths.

(ii) 85% of these patients were emergency admissions and an equal percentage died within 24 hours of admission.

(iii) Deaths due to ruptured uterus and accidental haemorrhage were seen in parity 4 and above.

(iv) Shock due to acute external or internal haemorrhage was found in 78.49%, shock with hypofibrinogenaemia in 14.84% and uraemia in 6.36%. One death due to secondary abdominal pregnancy was unavoidable.

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