Maternal mortality in the goverment hospitals, West Malaysia 1967—1969*

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MATERNAL MORTALITY is widely accepted as one of the most important indices of the standard of medical care in any community. This study was undertaken to find out the factors responsible for the maternal deaths in the Government hospitals of West Malaysia over the period 1967 to 1969. West Malaysia has eleven states and in each state, there is one large metropolitan type general hospital, a number of district hospitals, main health centres, sub-health centres and mid-wife centres. The purpose of this excellent infrastructure of maternal and child health clinics is to enable each clinic to cover a population of two thousand, so that abnormal obstetric cases from the rural areas can be referred to a district hospital or general hospital for treatment.

Materials

The study covers all maternal deaths in the Government hospitals of West Malaysia over the period 1967 to 1969.

Data

The data obtained have been tabulated as follows:

Table I
Maternal Deaths 1964 to 1969

Year	Total deliveries	Number of deaths	Maternal mortality
1964	83,654	224	27/10,000
1965	84,292	215	26/10,000
1966	87,101	209	23/10,000
1967	87,761	253	29/10,000
1968	89,230	219	23/10,000
1969	92,583	211	22/10,000

Table I shows that inspite of an increase in the number of deliveries in Government hospitals from 83,654 in 1964 to 92,583 in 1969, the maternal mortality had fallen from 27/10,000 to 22/10,000. The maternal mortality rate in Government hospitals was higher than the national maternal mortality rate because of the practice of referring all abnormal obstetric cases to hospitals for management.

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Table II
Cause of Maternal Deaths

Cause	Number of deaths			Death in percentage		
	1967	1968	1969	1967	1968	1969
Haemorrhage	134	104	91	52.9%	42.9%	43.1%
Toxaemia	31	29	29	12.2%	13.2%	13.2%
Infection	12	22	12	4.7%	10.0%	5.7%
Other complications of pregnancy, child birth and puerperium.	58	48	65	22.5%	21.9%	30.8%
Associated non obstetric disease.	20	16	14	7.9%	7.2%	6.6%

Table II shows that haemorrhage still ranks in the forefront of the causes of maternal deaths representing 52.9% in 1967, 42.9% in 1968 and 43.1% of maternal deaths in the Government hospitals of West Malaysia in 1969. The second important cause was toxaemia, 12.2% in 1967, 13.2% in 1968 and 13.2% in 1969, and the third cause was infection which accounted for 4.7% in 1967, 10.0% in 1968 and 5.7% in 1969.

Table III
Deaths due to Haemorrhage

Type of Haemorrhage	Number of deaths			Death in percentage		
	1967	1968	1969	1967	1968	1969
Ante-partum Haemorrhage	27	26	16	10.7%	10.8%	7.6%
Post-partum Haemorrhage	107	78	75	42.3%	35.6%	35.6%

Table III shows that post-partum haemorrhage was the most important cause of maternal deaths, and it is encouraging to note that over the years, there has been a gradual reduction in maternal deaths from 49.5% in 1964 to 35.6% in 1969. In the rural areas, midwives find post-partum haemorrhage a major problem because of the co-existence of anaemia in pregnancy and such a combination carries a high mortality risk. Because of the very high avoidable factor in deaths due to post-partum haemorrhage, the authors have suggested an active method of management of the third stage of labour for the rural midwives. The authors feel that intra-muscular syntometrine with controlled cord traction be introduced as standard methods of the management of the third stage of labour by midwives in the rural areas.

Table IV
Toxaemia of Pregnancy

Type	Number of death		
	1967	1968	1969
Pre-eclampsia	2	0	2
Eclampsia	19	25	20
Post-partum Eclampsia	10	4	7
	31	29	29

Inspite of the fact that deaths from toxaemia are preventable and that by careful antenatal treatment a reduction can be achieved, the deaths due to toxaemia have remained as 31 in 1967, 29 in 1968 and 29 in 1969. The answer to this problem would be early hospital admission in cases of excessive weight gain, elevation of blood pressure or proteinuria, but this poses problems for the rural patient as she is reluctant to be admitted to hospital for treatment. Socio-economic and cultural factors are responsible for her desire to want domiciliary delivery and only seek hospital treatment when there is an obstetric complication like eclampsia.

Table V
Infections

Type	Number		
	1967	1968	1969
Puerperal sepsis	9	10	11
Puerperal pyrexia	3	10	1
Thrombophlebitis	0	2	0
	12	22	12

Inspite of antibiotics, infections have remained a problem in the rural areas, especially in cases of premature rupture of the membranes. In such cases because of the delay in seeking treatment in hospitals, the patient presents with signs of septicaemia.

Other complications of pregnancy, childbirth and puerperium

Table II shows that this group accounted for 22.5% in 1967, 21.9% in 1968 and 30.8% in 1969.

The main causes of maternal deaths were the obstructed and neglected labours due to cephalopelvic disproportion, abnormal lie, presentation and ruptured uterus referred from the rural areas to the hospitals. The majority of patients in this group had their pregnancy labour or puerperium managed by an untrained kampong midwife and by the time the patients were referred to the hospital, the maternal conditions were very critical and inspite of resuscitation and treatment in the hospitals, the maternal morbidity and mortality was high.

Table VI
Associated Causes of Maternal Mortality

Cause	Number		
	1967	1968	1969
Anaemia	2	3	2
Hypertension	9	10	9
Vascular (pulmonary embolism)	6	3	3
Urinary tract infection — pyelitis and acute pyelonephritis	3	0	0

Table VI shows that hypertension was the most important cause in the associated maternal diseases. Anaemia is a major problem in the rural areas, but by itself it only accounted for 2 deaths in 1967, 3 in 1968 and 2 in 1969, but anaemia in combination with haemorrhage was the most important cause of maternal mortality in West Malaysia. With the introduction of antibiotics, deaths due to acute pyelonephritis were reduced from 3 in 1967 to 0 in 1968 and 1969.

Comments

Maternal mortality, like perinatal mortality in any community, is influenced by not only biological and social factors like physique, age parity, socio-economic status, cultural factors like child-bearing

habits, early marriage, spacing, activity, work level of education, housing, economic conditions but also influenced by the availability of the obstetric care and the utilisation of medical services. In Malaysia, the government has taken steps to reduce the maternal mortality, as shown below:

1. The Second Malaysia Plan is aimed at eradicating rural poverty and raising the standard of living of the rural people.

2. There is an excellent infrastructure of health units so that ultimately every 50,000 of rural population is covered by a health unit consisting of main health centres, with 4 sub-centres and 20 resident midwife-cum-clinics at the periphery to serve about 2,000 of the population.

3. A training programme has been started so that midwives, both trained as well as the untrained kampong midwives from the rural areas, are given refresher courses.

4. There is a plan to integrate the family planning services with the health services so that with family planning and population control the hazards of pregnancy and repeated child-bearing is minimised.

5. Applied nutritional projects are being carried out to eliminate malnutrition and anaemia in the rural areas.

6. The authors have suggested that since 60% of the births are conducted in the rural areas by trained or untrained midwives, there should be a standardised method for the management of the third stage of labour. The authors feel that by active management of the third stage of labour, i.e. intra-muscular syntometrine with controlled cord traction, the problem of post-partum haemorrhage can be eliminated thus reducing maternal deaths due to post-partum haemorrhage which at present accounts for 35.6% of the total maternal deaths.

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