

ABORTION DEATHS IN SINGAPORE (1968 — 1976)

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SNYPOSIS

An analysis of abortion deaths in Singapore during the three triennial periods, 1968-70, 1971-73 and 1974-76, was made. The mortality from abortions continued to fall after liberalization of abortion in 1970. The fall in mortality was due to elimination of deaths from criminal abortion. It was concluded that complete liberalization of abortion by legislation had succeeded in eliminating deaths from criminal abortion. The tremendous increase in the number of legal abortion after liberalization has so far not resulted in reversing the declining trend in abortion mortality.

INTRODUCTION

Maternal deaths from criminal abortion constitute a large proportion of maternal deaths in countries with restrictive abortion laws. The experience in Eastern Europe, the United Kingdom and the United States of America, has shown that with liberalization of abortion laws and the provision of legal abortion services, the number of abortion deaths dropped markedly. In Singapore, the legislation on abortion was first liberalized in 1970 and in 1974 abortion was made available on demand for pregnancies up to 24 weeks. One of the reasons for liberalization was to reduce the number of deaths from criminal abortion. Cheng et al (1971) reported that between 1967 and 1970, abortion deaths accounted for about 25% of all maternal deaths in Singapore. The majority of these abortion deaths was the result of criminal interference. Since the liberalization of abortion legislation, the number of legal abortions has increased from 1886 in 1970 to 15,464 in 1976. It is our belief that a similar number of abortions has been performed by doctors in the private sector but not notified. The number of abortions performed by non-medical persons has probably diminished just as dramatically although there is no available statistics to support this. It is the intention of this paper to examine the trend in mortality from abortions in relation to the changes that have occurred since the liberalization of abortion in 1970.

MATERIALS AND METHODS

Relevant data on death from abortion that occurred between 1968 and 1976 were collected from the annual reports of the Registrar of Births and Deaths in Singapore. Additional information was gathered from case records of these deaths that occurred in Kangdang Kerbau Hospital for Women; this accounted for 57% of the total number of abortion deaths in Singapore.

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The abortion deaths were grouped into 3 triennial periods for analysis on trends in relation to 2 major events viz., the limited liberalisation of abortion legislation in 1970 and the complete liberalisation of abortion legislation in 1974.

RESULTS

Table I shows that the Maternal Mortality Rate in Singapore fell from 0.37/1000 (1968-1970) to 0.20/1000 (1974-1976). There was a decline in the number of deliveries that took place during the same period of time.

Table II shows that the number of legalised abortion in Singapore had risen dramatically from 1886 (1968-1970) to 35,512 (1974-1976). However, the number of patients admitted into hospitals for all other types of abortion fell from 9,265 (1968-1970) to 5,368 (1974-1976).

Table III shows that there was a progressive fall in the number of abortion deaths from 15 in the first triennium to 9 in the third triennium, a decline of 40%. However, abortion remained the main cause of maternal death in Singapore. In 1974-1976, abortion was responsible for 34.6% of all maternal deaths. The number of obstetric deaths fell by 62.5% between the first and third triennium.

Data from the annual reports of Registrar of Births and Deaths show that the number of deaths from illegally induced abortions fell from 8 in 1968-1970 period to 1 in

1974-1976. No maternal deaths were classified under legally induced abortions for therapeutic or other reasons. However, there were abortion deaths in each triennium that were not specified as induced or spontaneous; the number of such deaths was 7, 5 and 8 for each triennium respectively.

Table IV shows the age distribution of abortion deaths. The majority occurred in the active reproductive age group of 20-39 years. There was a decline in the number of deaths in the age group 40 years and above, from 4 (1968-1970) to 1 (1974-1976).

The main cause of abortion deaths was sepsis (31 cases); this was associated with haemorrhage in 2 cases. The majority was due to septic abortion complicated by pelvic peritonitis, septicaemia and septic shock.

Out of a total of 37 abortion deaths in Singapore, 21 occurred in the Kandang Kerbau Hospital for Women. Analysis of the 21 cases showed that 12 were from complications of "spontaneous abortion", two of which probably had criminal interference. Five deaths resulted from criminal abortion. Four deaths resulted from complications of molar pregnancies — 2 died from septicaemia following evacuation of the uterus and the remaining 2 from haemorrhage. None of the deaths that occurred in the third triennium was the result of criminal abortion. The racial distribution of abortion deaths was Chinese 52%, Malays 33%, and Indians 15%.

TABLE I
MATERNAL MORTALITY IN SINGAPORE (1968-1976)*

Years	No of Maternal Deaths	No of Deliveries	Maternal Mortality Rate
1968-70	51	139,135	0.37 per 1000
1971-73	35	146,259	0.24 per 1000
1974-76	26	126,995	0.20 per 1000

*Compiled from data obtained from the Annual Reports of the Registrar of Births and Deaths in Singapore

TABLE II
NUMBER OF ABORTIONS IN SINGAPORE (1968-1976)*

Years	Legalised Abortions (Including Surgical M R*)	All Other Abortions (Hospital Admissions)	Total Abortions
1968-70	1,886	9,265	11,151
1971-73	12,126	5,927	18,053
1974-76	35,512	5,368	40,880

*Compiled from the Annual Reports of the Singapore Family Planning and Population Board

TABLE III

CAUSES OF MATERNAL DEATHS IN SINGAPORE (1968-1976)*

Causes of Deaths	1968-70		1971-73		1974-76	
	No	%	No	%	No	%
1 Abortion	15	29.4	13	37.1	9	34.6
2 Haemorrhage	15	29.4	12	34.3	5	19.2
3 Toxaemia	8	15.8	3	8.6	4	15.4
4 Ectopic Pregnancy	4	7.8	2	5.7	5	19.2
5 Others	9	17.6	5	14.3	3	11.6
TOTAL	51	100	35	100	26	100

*Compiled from data obtained from the Annual Reports of the Registrar of Births and Deaths in Singapore

TABLE IV

AGE DISTRIBUTION OF ABORTION DEATHS IN SINGAPORE (1968-1976)*

Age	1968-1970	1971-1973	1974-1976	Total	%
19 years & less	0	1	2	3	8.2
20-29 years	4	4	3	11	29.7
30-39 years	7	4	3	14	37.8
40 years & above	4	4	1	9	24.3

*Compiled from data obtained from the Annual Reports of the Registrar of Births and Deaths in Singapore

DISCUSSION

The number of deaths from abortion had been on the decline even before liberalization of abortion laws in 1970. Increasing affluence, literacy rate and better family planning services resulting in fewer women seeking abortion from the traditional abortionists, can account for the declining trend in abortion mortality. It is reassuring to find that the number of deaths from abortion has continued to fall after liberalization of abortion. It would appear that the tremendous increase in the number of legal abortions and number of illegal abortions performed by doctors have not so far negated the reduction in the number of deaths from criminal abortion.

It is a pity that it is not possible to study all 37 abortion deaths that occurred in the period of study in detail. Case

records of only 21 deaths were available for detailed analysis. It was, therefore, not possible to classify the deaths according to type of abortion, i.e., spontaneous, legally induced abortion, illegally induced abortion by doctors and criminal abortion. However, of the 21 deaths that could be analyzed, none that occurred in the third triennium resulted from criminal abortion. This evidence and also the impression of doctors working in the public hospital support the conclusion that complete liberalization of abortion in Singapore has sounded the death knell of criminal abortion as in other countries.

It has to be pointed out that in the first and second triennium after liberalization of abortion when abortion was not freely available to everyone, criminal abortion deaths still occurred. This situation again is similar to that in other countries like the eastern European countries, United Kingdom and the United States of America.

Considering the demographic trends of Singapore, the projected number of legalised abortions for the next triennium (1977-79) is around 50,000. About ten per cent of these 50,000 will be second trimester abortions. Using the Center for Disease Control Abortion Surveillance mortality figures for the first and second trimester abortions, we could expect two to three deaths from these 50,000 abortions. With the number of spontaneous abortions remaining fairly stable, deaths from these abortions are not expected to fall any further. It is, therefore, speculated that this further increase in the number of legalised abortions in the next triennium will result in a rise in the total number of abortion deaths.

Maternal mortality has been falling steadily over the last two decades. However, during the past three triennial periods, abortion has remained the main cause of maternal mortality. In fact, abortion accounted for a higher proportion of maternal deaths in the last triennium (34.6%) compared with the first (29.4%). This is partly due to the fact that the reduction in the number of obstetric deaths by 62.5% between the first and the third triennium is more than the reduction in abortion deaths which was 40%. In view of our speculation that mortality from abortion is likely to increase in the next triennium (1977-79), it would follow that abortion will assume an even more important position as a cause of maternal mortality in Singapore.

Sepsis remains the major cause of abortion deaths in spite of advent of powerful antibiotics. In recent years, gram negative aerobes and anaerobes have assumed greater importance (Bonnar 1977).

In Singapore, the Malays have a relatively higher incidence of abortion deaths (33%) compared with the Chinese (52%) who form the major population group. For instance, in 1976, the Malays were responsible for 15% of all deliveries while the Chinese, 77% (Department of Statistics, Singapore). This is probably accounted for by the reluctance of Malays, generally, to utilise medical services; also, possibly their poorer nutritional status may lower their resistance to infections and haemorrhage. As

could be expected, a significant proportion of abortion deaths occurred in females who were elderly (above 40 years) and of high parity. These women were generally in a desperate situation as a result of their unwanted pregnancies so that they often resorted to illegal abortion. However, with the liberalization of the Abortion and Sterilization Laws in 1974, the mortality from this group of women should continue to decline.

CONCLUSION

The complete liberalization of abortion legislation has succeeded in eliminating deaths from criminal abortion. The tremendous increase in the number of legal abortions after liberalization has not so far resulted in reversing the declining trend in abortion mortality.

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