Induced abortion – a hospital based study

D. N. Fernando[1] and R. A. S. Rabel[1]

The Ceylon Journal of Medical Science 1992; 35: 1-5

Summary

A study of all cases of abortion admitted to randomly selected wards of three tertiary level institutions during a three month period was carried out. Relevant information was collected at the time of admission and by follow up of each patient. Based on specific criteria, induced abortions and spontaneous abortions were identified. A random sample of women admitted for delivery during the same period was included as a 'comparison' group.

Of the total group of women admitted with a history of abortion 64% have had induced abortions. These women were comparatively older, had one or more live children, were of a lower educational level and a majority admitted that the pregnancy was unplanned. A substantial proportion had practised traditional methods of contraception prior to the present pregnancy. This observation is of importance to programme planners, as failure of the contraceptive method used, whatever it be, could be a contributory factor for induced abortion.

Key words: Induced abortion, hospital admissions.

Introduction

Abortion is defined as expulsion or threat to expulsion of the products of conception before the 28th week of gestation. In Sri Lanka, 10% of all maternal deaths are due to abortions (1) and a study of the pattern of hospitalisation indicates an admission rate for abortions of 683.4 per 100,000 women in 1985 (2). These data however do not indicate the problem of induced abortion, which is presently being considered as a global problem. The worldwide rate has been estimated to be between 37-55 per 1000 women in the reproductive age group (3).

Distinction between spontaneous and induced abortion is important. Induced abortions tend to present with more serious complications than spontaneous abortions, and therefore costs more in terms of hospital days and other resources. Prevention of spontaneous abortion is a medical problem, whereas prevention of induced abortion is related to the use of family planning services.

As legislation in Sri Lanka allows termination of pregnancy only if the pregnancy endangers the life of the mother, it is unlikely that routinely available data will yield information on the problem of induced abortion. The limited data from reported studies (4, 5) and the much publicized statements in the media indicate the need for more information relevant to this problem.

Methodology

This study was carried out in three of the tertiary level hospitals in the district of Colombo. All women who were admitted to randomly selected wards of the gynaecological/obstetric units of these hospitals with a history of vaginal bleeding following a period of amenorrhoea of less than 28 weeks of gestation were included in the study. The duration of the study was three months.

A pretested questionnaire was used to elicit relevant information. All interviews were done by the same investigator who was a medically qualified person. Information on presenting symptoms and signs were obtained from hospital records and each patient was followed up until she was discharged from hospital.

A random sample of 260 women, who were admitted to the same hospitals during the same

1 *Department of Community Medicine, Faculty of Medicine, Colombo 8.*

period for delivery at full term, were also interviewed, to obtain basic socio-demographic information and information related to the present pregnancy. This group was considered as a possible 'control' group for comparison as they also belonged to the reproductive age group.

Based on the relevant information from the history and the clinical findings, each woman admitted with a history of abortion was categorised according to the criteria suggested by the World Health Organisation (6).

1. "Certainly" induced abortion – when the woman herself provides this information or when such information is provided by a health worker or a relative or when there is evidence of trauma or a foreign body in the genital tract.
2. "Probably" induced abortion – when the woman has (a) signs of abortion accompanied by sepsis or peritonitis *and* (b) the woman states that the pregnancy was unplanned.
3. "Possibly" induced abortion – if only one of the conditions listed in 2 above is present.
4. "Spontaneous" abortion – if none of the conditions listed under 1-3 is present.

All women who were admitted with a history of abortion were asked whether the present pregnancy was planned. Information on the method of contraception practised (if any) during the 3 months preceding the present pregnancy was also obtained from this group.

Results

A total of 371 women who gave a history of abortion admitted to the selected wards in the relevant hospitals during the period of study and a random sample of 260 women admitted for delivery at full term to the same institutions during the same period were included in the study. The latter group served as the "control" group.

Of the women admitted with a history of abortion, 48 (12%) were classified as having had a "certainly induced abortion", 58 (17%) – "probably induced abortion" and 133 (35%) – "possibly induced abortion". Thus, the number of women in the "spontaneous abortion" group was 133 (36%).

Table I compares some of the basic socio-demographic characteristics of the three groups – induced abortion (IA), spontaneous abortion (SA) and the control group. The proportion of women below 25 years of age was higher in the SA group compared to the IA group and the controls, while % of women with lower levels of education i.e. below grade 5, was highest among the IA group (26%). Some differences in religious groups were seen in that 18% among the IA group were Christians and Muslims, compared to 9% among the SA group. No attempt was made to compare the distribution between ethnic groups, as more than 84% of women within each group belonged to one ethnic group, thus making the number belonging to the other groups relatively small.

A high percentage of the women in the SA group were primaparae compared to the other two groups, and there were no women with parity 4 or more, in this same group. Of the women in the SA group 91% had no living children, the comparable values for the IA group and the control group being 8% and 17% respectively. None of the women in the SA group had more than 2 living children.

Of the controls 96% were married at the time of the study, 2% widowed and 2% divorced. Thus, from the total study group, 8 women (2%) were single at the time of the study, and all of them have had induced abortions.

Data available for the multiparous women indicated that the % having birth intervals of less than 24 months was higher among the SA group (66%) than in the IA group (44%).

Of the women in the SA group, 97% and in the IA group 4% indicated that the present pregnancy was planned (Table 2). Comparison of the practice of contraception during the period preceding the present pregnancy

Table 1

Comparison of Socio-demographic characteristics of the Spontaneous abortion (SA) group, Induced abortion (IA) group and the control group.

	SA (*n* = 133) %	*IA* (*n* = 238) %	*Controls* (*n* = 260) %
Age group			
< 20	11	5	2
20	35	26	22
25	30	28	28
30	17	26	32
> 35	7	15	17
Educational level			
No schooling	4	5	7
Grade 1-5	13	21	12
Grade 6-9	42	50	51
Grade 10-11	32	18	27
Grade 12 or more	9	6	3
Religion			
Buddhism	87	80	70
Hinduism	4	2	6
Christianity (including R.C.)	6	10	14
Muslim	3	8	7
Parity			
1	71	14	8
2	23	35	47
3	6	24	26
> 4	–	27	19
No. of living children			
None	91	17	8
One	6	32	47
Two or more	3	51	45
Marital status at the time of study			
Married	100	98	96
Divorced	–	–	2
Widowed	–	–	2
Unmarried	–	2	–

Table 2

Comparison of the "abortion groups" (SA and IA) by information related to planning of pregnancy and practice of contraception.

	SA (*n* = 133) %	*IA* (*n* = 238) %	
Present pregnancy planned			
Yes	97	4	p<.001
No	3	96	
Wish to have more children			
Yes	96	57	p<.001
No	4	43	
Practised contraception prior to present pregnancy			
Yes	9	59	p<.001
No	91	41	

Table 3

Contraceptive methods practised by the induced abortion group.

Method	**(n = 141) %**
Oral contraceptives	21
Depot provera	6
IUCD	2
Condom	13
Coitus interruptus	48
Rhythm method	10

indicates that 59% of the IA group had practised some method of family planning, compared to 9% in the SA group. 43% of women in the IA group did not want any more children, a value significantly higher than that for SA group (4%).

There was one death among the 374 women admitted with a history of abortion, giving a case fatality rate of 0.3%. This death occurred in a woman who admitted she had an induced abortion. The duration of stay in hospital varied

widely from 1-45 days with a median of 4 days, for the total group. Of women admitted for IA 41% stayed in hospital for 5 days or more, compared to 36% among the SA group, this difference being not significant statistically.

Inquiries as to the contraceptive method practised prior to the present pregnancy indicated that 58% among the IA group had practised "traditional methods". These included coitus interruptus (48%) and rhythm method (10%). An additional 21% had used oral contraceptives and condoms were used by 13% (Table 3). No attempt was made to identify failures among the SA group, as the number of women who indicated such failures was only 12.

Discussion

The approach used in this study enabled identification of induced abortions using specified criteria based on information collected using a structured questionnaire, and follow-up of each of the women included in the study. These criteria have been applied in studies in other developing countries and have been found to be valid (6, 7).

The study indicated that more of the women who had IA were older, had one or more living children and had lower levels of education, compared to the group who had SA. The number of women who admitted to being unmarried, though small, is of importance as all of them had induced abortions, which indicates that the "out of wedlock pregnancies" may be an important risk factor for induced abortions.

A substantial % of women who had IA said that they did not wish to have any more children, and had practised some method of family planning, thus indicating their desire to avoid a pregnancy. Of this group 91% also admitted that the present pregnancy was unplanned. It seems likely that due to some reason, the method of contraception used had failed, resulting in the present pregnancy for which they had sought an induced abortion.

The common methods practised by those who had IA were coitus interruptus, oral contraceptives, condom and rhythm method. There is no indication in this study that some women used IA as a method of contraception per se, possibly because IA is not legalised in Sri Lanka. The observations in this study do not imply that oral contraceptives is not a satisfactory method of contraception, but some women who used this method did become pregnant and sought abortion.

The very low case fatality rate seen in this study need to be interpreted with caution as the hospitals included in the study are a highly select group, where available facilities could be considered optimal. The finding that more of the women admitted for IA stayed longer in the hospital, is similar to that observed in other studies (8). This highlights the importance of preventing this problem, even from the point of view of provision of health services.

Sri Lanka has a well established family planning programme. According to national level surveys conducted in 1981/82 and 1987, the overall contraceptive prevalence rate has increased from 47.7% in 1981/82 to 61.7% in 1987. A substantial proportion of women had practised "traditional methods", 26% in 1981/82 and 21% in 1987 (1).

Contraceptive failure among the users of traditional methods of family planning, as a contributory factor towards induced abortions seems a possibility. Hence, the observations in this study are of importance to programme planners in directing their attention to improving the effectiveness of the use of traditional methods, or else re-orient the programmes to encourage the use of other methods by the groups who are more at risk of induced abortions.

Acknowledgements

We wish to thank the Directors of De Soysa Hospital for Women, Castle Street Hospital for Women, Colombo South Hospital and all Consultant Obstetricians in the above hospitals for granting us permission to carry out this study. Financial assistance provided by the University of Colombo is gratefully acknowledged.

References

1. Medium Term Plan 1990 – 1994 Family Health Program, Sri Lanka; Family Health Bureau, Ministry of Health and Women's Affairs. Sri Lanka, 1989.

2. Annual Health Bulletin, Ministry of Health, Sri Lanka, 1990.

3. Tietze C, Henshaw S K. *Induced abortion. A World Review*, 6th Edition. The Alan Guttmacher Institute, 1986; pp. 143 – 149.

4. Rajanayagam S. Presidential Address – Sri Lanka Medical Association. *Ceylon Medical Journal* 1973; 18:123 – 129.

5. Kodagoda N, Senanayake P. Some aspects of abortion in Sri Lanka. Presented at the International Symposium on Reproductive Health care, Marie, Hawaii, 1982.

6. World Health Organisation Project 86912, Protocol for Hospital Based Descriptive Studies of Mortality, Morbidity related to Induced Abortion: Task Force for Epidemiological Research in Reproductive Health, Geneva: WHO unpublished document Geneva 1987.

7. Aggarwal V P, Mati J K G. Epidemiology of induced abortions in Nairobi, Kenya. *Journal of Obstetrics and Gynaecology of East & Central Africa* 1982; 1:54:54 – 57.

8. Khan A R, Begum S F. et al. Risks and cost of illegally induced abortion in Bangladesh. *Journal of Biosocial Science* 1984; 16:89 – 98.