

Original article

Retrospective study on abortion admissions in Jimma Hospital, South West Ethiopia

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Abstract: Abortion admissions to Jimma Hospital over a period of three years were studied retrospectively. There were a total of 1540 abortion admissions of which 25.4 % were residents from outside Jimma town. Those abortion cases from outside Jimma town had a significantly higher rate of sepsis, case fatality and longer hospital stay than those from Jimma town. The mean hospital stay was 4.03 (SD=5.96) days. Septic abortion was the commonest cause of maternal death and laparotomy for abscess drainage. Sixty-one percent of the abortion cases died in the first week of admission while the remaining died thereafter. Besides the various preventive measures, safe abortion services within the essential obstetric services should be made available and accessible. [Ethiop. J. Health Dev. 1996;10(3):167-170]

Introduction

In Ethiopia induced abortion is illegal unless done to save the life of the mother. In countries with restrictive laws, abortion admission to hospitals is mainly for abortion-related complications. In Africa, abortion accounts for 9.4% to 90% of hospital admissions (1). Induced abortion is an increasing problem, especially in urban areas where socio-economic pressure to space and limit births is greatest (2). Hospital studies have shown that abortion cases (of which up to 60% are most likely induced) are rising rapidly (3).

Considerable amounts of hospital resources are consumed for the management of abortion and its complications (4). Sepsis and haemorrhage are the main complications (4,5,6). Abortion is also one of the commonest causes of maternal death (7).

In Ethiopia, there are limited publications on the subject especially on laparotomies done after abortion. This paper addresses the abortion-related burden on abortion cases and on a regional hospital as measured by sepsis, hospital stay, maternal deaths and laparotomies. There is no previously published study on abortion in the region.

Methods

All abortion cases admitted from 1989-1992 to the department of obstetrics and gynaecology of Jimma Hospital, South West (SW) Ethiopia, were identified from the admission and discharge book of the department. Cases operated for abscess drainage were noted from the operation registry book. The following data were collected from these books: address, age, hospital stay and condition on discharge. Hospital charts were extended if the records were incomplete or if a patient had laparotomy or if she died. The diagnosis of septic abortion was mainly made on clinical ground by the attending physician. Data entry and analysis was done using the Epi Info software.

Results

Within the three years of the study period, there were a total of 1540 abortion admissions and 3047 (1016/year) deliveries (both live and stillbirths) in Jimma Hospital. The yearly abortion admissions

within the three years were 358, 574 and 608 cases with an average of 513/year. The abortion ratio (abortion

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cases/deliveries) was 50.5%. Abortion cases accounted for 31 % of all the admissions to the obstetrics and gynaecology department.

Table 1 Hospital stay and age distribution by residence, sepsis, laparotomy and outcome of abortion admissions, to Jimma hospital, 1989-1992

	Hospital Stay*		Age (years)	
variables	Mean	x ²	mean	² x
	(SD)	(p-value)	(SD)	(p-value)
Residence: Jimma	3.767	17.849	23.990	18.351
	(5.862)	(0.000024)	(5.895)	(0.000018)
outside	4.837		25.471	
Jimma	(6.25)		(6.284)	
Sepsis: Septic	9.996		24.199	1.295
	(11.572)	(0.000000)	(6.498)	(0.255111)
Non-	2.734		24.429	
Septic	(2.206)		(5.975?)	
Laparotomy:				
yes	27.056	100.750	23.421	3.050
	(14.414)	(0.000000)	(7.442)	(0.0807431)
No	3.294			24.412
	4.294		(6.003)	
Outcome: Alive	3.923	13.145	24.339	1.282
	(5.832)	(0.000288)	(6.009)	(0.257553)
Expired	9.786		26.621	
	(9.144)		8.537)	

* In days.

The mean age of the abortion cases was 24.4 (S.D, 6.1) with a range of 13 to 50 years. Fifty-four and 79.6 percent of them were less than 25 and 30 years of age, respectively. There was no significant difference of septic abortion ($p=0.39401$), maternal death due to abortion ($p=0.39401$) or laparotomy ($p=0.14686$) among the different age groups. The cases from outside Jimma town were older ($P=0.00018$) than those from Jimma town (Table I). There was no linear correlation between age and duration of hospital stay ($r=0.02$, 95% CI=-0.03-0.07). Abortion cases from outside Jimma town accounted for 25.5% of the abortion admissions (Table 2). The hospital stay (Table I), sepsis and mortality rates (Table 3) of these cases were significantly higher among residents from outside Jimma than those from Jimma town. There was no significant difference in laparotomy among the two residents.

The mean hospital stay of all abortion cases was 4.027 (SD 5.958) days while the median was 2 days and the range was 1-75 days. The hospital stay of septic cases (mean 9.996, SD 11.572 days) was statistically significantly different ($P=0.00000$) from the non-septic cases (mean 2.734, SD 2.206 days). The hospital stay was also significantly longer for operated and expired cases (Table 1).

Within the three years, sixty-three laparotomies were done to manage pelvic or abdominal abscesses. Thirty-eight (71.7 %) of these cases were after abortion. Six of the 38 had uterine perforation. The over all death rate after these laparotomies was 24.5% (13/53). Among cases with non-abortion and abortion related laparotomies, the death rates were 13.3% (2/15) and 29.0% (11/38), respectively. There was no complete information on 10 cases (Table 4).

There were a total of 69 maternal deaths during the three years with an average maternal mortality ratio of 2450/100,000 live births (69/2819). Abortion was the commonest cause among these deaths while ruptured uterus was the second. Approximately 61% of the abortion deaths took place in the first week of admission while 39% died during or after the second week. Fifteen (53.9%) of the abortion deaths were among those who were less than 25 years of age. The case fatality ratio for all abortions and septic abortions were 1.9% and 10.5%, respectively. All abortion deaths were mainly due to sepsis.

Table 2. Age and Residence Distribution of 1507* Abortion Cases. in Jimma Hospital, 1989-1992.

Residence	13-19	20-24	Age in Years 25-29	30-50	Total
Jimma	289	346	271	217	1123
Row%	(25.7)	(30.8)	(24.1)	(19.3)	(745)
Ouside Jimma	56	120	118	90	384
Row %	(14.6)	(31.3)	30.7	23.4	(255)
Total	345	466	389	307	1507
Collum %	(22.9)	(30.9)	(25.8)	(20.4)	(000)

*There were 33 missing values.

Discussion

The data were collected from routinely documented hospital records. With the prevailing routine data collection, the completeness and accuracy of information is uncertain. To minimize misinformation, the items collected were limited to variables with relatively less liability to incorrectness and incompleteness. Though there is underestimation of the burden on abortion cases and hospital resources, the data give a picture of the problem with minimum cost.

Table 3: Hospital Stay, Sepsis, Laparotomies and Outcome of Abortion Cases*, Jimma Hospital, 1989-1992

	Septic case		Outcome		Laparotmy	
Residence	septic	Non-septic	Alive	Dead	Yes	No
Jimma	174	960	1120	14	22	1112

Row %	15.3%	84.7%	1.2%	1.9%	98.1%	98.1%
Outside Jimma	99	288	372	14	13	374
Row%	25.6%	74.4%	96.4%	3.6%	3.4%	96.66%
Total	273	1248	1492	28	35	1486
Column%	17.9%	82.1%	98.2	1.8%	2.3%	97.7%
p-value	0.00000		0.00510			0.15813

* Due to missing values, the total number of cases varies between 1510 to 1521.

Abortion is an increasing problem in Jimma hospital as in other parts of the country and Africa. At the Kenyatta National Hospital, Nairobi, an increase of 600 -800% was seen over a decade (7). In 1982, there were 857 abortion cases seen in five hospitals in Addis Ababa (8). Three and four years later, the yearly admission to the same five hospitals was 3,244 and 3,942, respectively (9). In 1994, it was reported that the same five hospitals had a total of 2,275 abortion cases over six months, approximately 5500/year (6). In Jimma, the number of case has almost doubled within the three years. This increasing trend in Addis Ababa and Jimma may be partly explained by difference in quality of record keeping and type of study (retrospective and prospective). A real increase in the incidence of induced abortion is also an important contributing factor .

The abortion problem is not limited to main urban centres, but also to other smaller towns too. The five-hospital study in Addis Ababa showed that 11.4% of the cases were from outside the city (6). In this study 25% of the abortion admissions were from small urban and non-urban centres. These cases of abortion had significantly higher sepsis and death rate than the abortion cases from the town of , Jimma in which the hospital is located. Usage of relatively less aseptic abortion method and delay in getting medical aid may contribute to these differences. Most probably, delay in medical aid plays the major role. Not all residence areas grouped under "outside Jimma" have a nearby health centre and not all health centers give evacuation and curettage services. Health facilities which give such services also face a number of inadequacies which vary from unavailability of trained manpower to shortage of drugs and instruments.

The abortion burden is documented in a number of studies using different measurements. In Tanzania, the cost to the health service (drugs, meals, staying costs and surgical procedure, but not the time spent by health workers on these cases) was estimated to be 1500 Tanzanian Shilling (TSH) at a time when the budget of the Ministry of Health had 210 TSH per capita per year (10). One of the previously mentioned five-hospital studies in Addis Ababa revealed that 57% of all maternity admissions were due to abortion (9). In a southern regional hospital, Yirgalem, a total of 185 cases were seen in six months (11). In Jimma Hospital, the yearly admission and the proportion of abortion admissions was comparable to hospitals in the capital city.

Table 4: Causes and outcomes of laparotomies done to drain abscess, Jimma hospital, 1989-1992.

	Outcome				
	Alive	Dead		Total	
Cause	No.	No.	(Row %)	No	(Coll.%)
Abortion	27	11	(29.0)	38*	(71.7)

Non-abortion	13	2	(13.3)	15	(28.3)
Total	40	13	(24.5)	53**	(100)

*32 Had abscess while 6 had uterine perforation 100.

** 10 cases were not included since their hospital charts could not be traced and they were not included in the ward registry book.

The present study and other studies in Ethiopia indicate that abortion-related laparotomies and case fatalities are major concerns. There were three laparotomies within a year among abortion patients studied in four public hospital in Oar es Salaam, Tanzania (10) while there were I R laparotomies within six months in the fivl' hospitals of Addis Ababa. In Jimma Hospital there were about 12 such laparotomies each, year .The abortion case fatality rate of 1.9% in Jimma hospital and 6% in Yirgalem, South Ethiopia, is also higher than the estimate in Kenya which is 0.1-0.6% (3). Late 'resentation and weak management are two of the various contributory factors. It is easonable to assume that the 61 % deaths the first week were mainly due to late presentations of cases while the 35% deaths that took place later were mainly due to poor hospital management.

Abortion is a major cause of maternal mortality. To reduce the maternal mortality and morbidity due to abortion, measures to prevent unwanted pregnancy and safe outlets to tackle unwanted pregnancies are the corner stones. After studying the circumstances surrounding many of the maternal deaths, one of WHO's technical group recommendation was strengthening the "essential obstetric function" at the first referral level. The referral level could be a health centre or a district or sub-district hospital. The 'essential obstetric functions' pertinent to abortion include: evacuation of the uterus, surgical treatment of sepsis, anaesthesia, medical treatment of sepsis, shock, anaemia and blood replacement (12). Under-estimating these functions is losing the last chance to avert maternal tr.agedies. Women from rural and less urbanized areas are the ones who are hard hit since neither family planning (including safe termillation of unwanted pregnancy) nor health services capable to manage abortion and its complications are accessible to them.

References

1. World Health Organization. Abortion: A Tabulation of Available Data on the Frequency and Mortality of Unsafe Abortion. 2nd Edition. WHO/FHE/MSM/93.13 Geneva. 27-36.
2. McFall IA. Induced Abortion. In: Disease and Fertility. New York, Academic Press, 1984;387424.
3. Rogo KO. Induced Abortion in Sub- Saharan African. East African Med l 1993;70:386-395.
4. Binkin NI, Burton NN, Toure AH, Traore ML, Rochat RW. Women Hospitalized for Abortion. Complications in Mali. International Family Planning Perspective, 1984;10:8-12;
5. Okonofua FE, Onwudiegu U, Odunsi OA. Illegal Induced Abortion: A srudy of 74 cases in IleIfe, Nigeria. Tropical Doctor 1992;22:75-78.
6. Eyob T, Seyoum Y, Adane G, Bogarian D, Essayas M, Kassaye K, Zelalem H. Survey of Abortion in Five Hospitals in the City of Addis Ababa. Ethiopian Med J 1994;32:284 (abstract).
7. Kwast BE, Widad KM, Ebrahim M, Fowkes FOR. Epidemiology of Maternal Mortality in Addis Ababa: A Community Study. Ethiopian Med J 1985;23:7-16.
8. Nebiat T. Abortion Survey. (1982) Available in Family Guidance Association of Ethiopia. Addis ababa.

9. Ethiopian Health Professionals Association (EHPA) Sele Wourja Yetederege Tnatawi Zegeba (A Study on the Problem of Abortion). Available in the Library of Ethiopian Studies, Addis Ababa.
10. Mpangile GS, Leshabari MT, Kihwele DI. Factors associated with Induced Abortion in Public Hospitals in Dar es Salaam, Tanzania. *Reproductive Health Matters* 1993;(2):21-31.
11. Tesfaye M, Tinbit GT. A Six Month Prospective Study on Different Aspects of Abortion. *Ethiopian Med J* 1993;31:165-172.
12. WHO, Report of Technical Working Group (1986) Essential Obstetric Functions at First Referral Level. FHE/86.4. WHO Geneva.

