Abortion Admissions in Tertiary Hospitals An ICMR Task Force Study

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Summary: **The Study Covers abortion admissions in 31 teaching hospitals from 16 States/Union territories. On the whole abortion admissions constituted 18.25% of the total obstetric admissions. Medical termination of pregnancies constituted 59.6 per cent of abortion admission, spontaneous abortions were 36.7 per cent and other abortions 3.7 per cent. Admissions for septic abortion formed 1.2 per cent of the total abortions. Seventy nine per cent of the septic abortion cases gave history of interference. Overall mortality rate among septic abortions was 16.8 per 100 cases. Mortality rate was higher among women who had history of interference. If person who conducted the abortion is considered, highest mortality was in those women who had interference done by untrained dai.**

Introduction

Women's reproductive health including abortions is a major health concern. In context to woman's right over her body and fertility the need to opt out of an undesirable pregnancy safely is as important as reaching it to joyous outcome. After more than two decades since legalization of medical termination of pregnancy (MTP) in 1971, the facilities for safe abortion are still far from satisfactory with about 10 per cent of maternal deaths being due to abortion (Health Information- India 1990. India). The MTP facilities need to be augmented continuously methods in view of changing demands and development of newer, safer and more efficacious. There is need for information on existing facilities, utilization of facilities, demand for procedures for 1st or 2nd trimester terminations of pregnancy and other abortion related problems, accessibility and availability of efficacious and safe procedures.

Realizing that hospitals could be most accessible source of reliable and current information, the Indian Council of Medical Research made an effort to standardize collection and compilation of hospital statistics from 31 teaching hospitals, including private, referral, small and large general hospitals. The study included 4 hospitals from UP, 3 from Delhi, Calcutta and one each from Bihar, Assam and Orissa in East; 2 from Rajasthan, 4 from Maharashtra and 1 each from Gujarat and Goa from West and 4 from Madras and one each from Madurai, Trivandrum, Pondicherry and Belgaum from Southern region of the Country.

Observations

Hospital statistics on in-patients from the departments of obstetrics and gynecology from the 31 hospitals were collected on monthly basis. This paper includes observations for a period of one year from April 1993 to March 1994. There were a total of 260346 obstetric admissions during this period. Twelve of these 31 hospitals had less than 500, eight between 5000 to 10000 and 11 more than 10000 obstetric admissions. Information on reasons for admission were collected in three broad categories i.e. abortions, antenatal complications and admissions for delivery and postpartum complications. The

Table 1:
Percentage Distribution of Obstetric Admissions.

State/UT/ Institution			Total Obstetric admissions	percentage of obstet admissions for				
				Abortions			Antenatal Complica-tions	Del & PP Complica-tions
J&K	Jammu Med. Coll.		8857	32.3	(21.2	11.1)	12.2	55.5
Chandigarh	PGIMER	Chandigarh	4779	18.9	(8.5	10.4)	13.9	67.2
Delhi	Kasturba Hos.	Delhi	19201	20.0	(7.6	12.4)	19.4	60.6
	SJ Hos.	N. Delhi	18387	15.3	(9.8	5.5)	7.4	77.3
	AIIMS	N. Delhi	3567	42.4	(36.7	5.7)	13.4	44.2
U.P.	KG MC	Lucknow	7179	23.7	(13.6	10.1)	24.5	51.8
	MLN MC	Allahabad	2210	47.6	(37.4	10.2)	16.6	35.7
	GSVM MC	Kanpur	3174	37.4	(27.7	9.7)	12.5	50.1
	LLRM MC	Meerut	2983	75.2	(70.7	4.7)	3.2	21.5
West Bengal	RG KAR MC	Calcutta	12073	16.5	(10.2	6.3)	11.8	71.7
	Eden Hos.	Calcutta	9570	18.2	(8.9	9.3)	8.5	73.3
	IPGMER	Calcutta	2602	43.8	(34.9	8.9)	35.3	20.9
Bihar	Patna Med. Coll.		10028	11.5	(10.3	1.2)	16.2	72.3
Assam	Med. Coll	Gawahati	7716	29.1	(19.5	9.6)	7.6	63.3
Orissa	Med.Coll	Cuttack	5623	30.8	(25.8	5.0)	12.1	57.1
Rajasthan	SMS MC	Jaipur	13225	19.5	(7.8	11.7)	21.2	59.2
	SP MC	Bikaner	9232	20.8	(6.9	13.9)	18.9	60.3
Gujarat	Baroda Med.Coll		4417	22.9	(16.2	6.7)	13.3	63.7
Maharashtra	KEM	Bombay	7502	24.3	(9.5	14.8)	15.9	59.8
	KEM	Pune	2730	19.3	(11.6	7.7)	29.7	51.0
	JJ Hos.	Bombay	3044	14.3	(7.7	6.7)	24.9	60.8
	BJ MC	Pune	10326	22.7	(16.4	6.3)	17.8	59.5
Goa	Med. Coll	Goa	4065	10.0	(4.3	5.7)	35.2	54.8
Tamil Nadu	IOG	Madras	19670	5.9	(2.1	3.8)	13.6	80.4
	KMC	Madras	8551	11.7	(6.0	5.7)	12.1	76.2
	KG Hos.	Madras	14572	6.5	(3.1	3.4)	19.2	74.3
	RSRM Hos.	Madras	11937	8.5	(3.2	5.3)	16.2	75.4
	Madurai Med. Col.		11846	8.2	(3.8	4.4)	17.2	74.6
Kerala	SAT Hos.	Trivendrum	13430	14.1	(10.7	3.4)	14.2	71.7
Pondicherry	JIPMER	Pondicherry	4720	8.2	(2.6	5.6)	18.0	73.8
Karnataka	JN MC	Belgaum	2950	15.7	(9.3	6.4)	12.3	72.0
	Total		260346	18.2	(10.8	7.4)	15.7	66.8

Figures in parenthesis indicate percentage admissions for medical termination of pregnancies and other abortions

number of obstetric admissions during the reporting year from the participating hospital varied between 2210 at Allahabad to 19670 at IOG, Madras (Table 1).

On the whole 66.8 per cent of the admissions were for delivery or postpartum complications, 15.7 for an-

Table 2:
Types of Abortion Admission

State/UT/ Institution			Total abortion admissions	percentage distribution MTPs 1st Trim.	MTPs 2nd Trim	Spontaneous abortions	Other abortions	(Septic/ Ectopic/ Vesicular mole		
J&K	Jammu Med. Coll.		2886	65.7	0.1	32.2	1.97	(29	22	7)
Chandigarh	PGI	Chandigarh	902	39.8	5.1	37.0	18.09	(50	73	40)
Delhi	Kasturba Hos.	Delhi	3802	32.7	5.3	60.8	1.25	(2	19	24)
	SJ Hos.	N. Delhi	2910	57.6	6.8	33.6	2.03	(18	34	10)
	AIIMS	N. Delhi	1459	75.4	5.8	16.8	1.90	(0	22	5)
U.P.	KGMC	Lucknow	1704	50.3	7.4	36.4	5.92	(56	37	8)
	MLN MC	Allahabad	1053	75.3	3.3	19.9	1.42	(0	10	5)
	GSVM MC	Kanpur	1187	65.5	8.6	20.9	4.96	(44	10	5)
	LLRM MC	Meerut	2253	80.8	13.5	4.8	0.89	(7	4	9)
West Bengal	RG KAR MC	Calcutta	2255	52.0	9.6	34.5	3.99	(47	50	4)
	Eden Hos.	Calcutta	1749	42.8	6.0	48.9	2.34	(39	0	1)
	PGMER	Calcutta	1141	72.7	7.2	16.0	4.03	(0	41	7)
Bihar	Patna Med. Coll.		1155	71.1	18.4	9.2	1.28	(5	14	1)
Assam	Med. Coll	Gawahati	2248	64.9	2.0	31.1	1.91	(44	1	0)
Orissa	Med.Coll	Cuttack	1632	76.9	6.7	13.2	3.15	(15	30	15)
Rajasthan	SMS MC	Jaipur	2585	36.6	3.6	57.4	2.37	(5	34	24)
	SP MC	Bikaner	1772	27.9	5.2	64.2	2.66	(12	31	4)
Gujarat	Baroda Med.Coll.		1095	62.3	8.2	26.5	3.09	(6	17	11)
Maharashtra	KEM	Bombay	1821	27.5	11.5	57.5	3.43	(1	51	12)
	KEM	Pune	527	50.9	9.4	36.0	3.58	(4	15	0)
	JJ Hos.	Bombay	447	42.7	10.9	43.9	2.42	(2	3	7)
	BJ MC	Pune	2341	52.4	19.7	24.8	3.07	(28	19	25)
Goa	Med. Coll.	Goa	408	39.7	2.5	50.5	7.35	(1	25	4)
Tamil Nadu	IOG	Madras	1148	34.0	7.0	51.8	7.18	(28	50	83)
	KMC	Madras	1013	46.6	0.1	47.1	6.28	(16	30	26)
	KG Hos.	Madras	1031	36.4	10.8	50.6	2.21	(12	1	22)
	RSRM Hos.	Madras	1009	31.6	5.3	55.5	7.64	(27	28	25)
	Madurai Med. Coll.		920	22.6	23.6	42.9	10.95	(32	48	26)
Kerala	SAT Hos.	Trivendrum	1879	65.7	10.0	17.5	6.83	(22	32	94)
Pondicherry	JIPMER	Pondicherry	513	26.6	5.3	52.9	15.20	(25	38	20)
Karnataka	JN MC	Belgaum	452	45.0	14.1	38.9	2.01	(5	0	4)
	Total		47927	51.8	7.8	36.7	3.69	(582	789	529)

Figures in parenthesis are the number of cases of septic abortions, ectopic pregnancies and vesicular mole

tenatal complications and 18.2 per cent for abortions including 10.8 per cent for MTPs and 7.4 per cent for other abortions. In the northern region, abortion admissions varied between 15.3 per cent (SJH, New Delhi). to 75.2 per cent (Meerut) as compared to between 5.9 per cent (IOG, Madras) to 15.7 per cent (Belgaum) in the hospi-

Table 3: Type of Spontaneous Abortion

State/UT/ Institution			Total spontaneous abortions	Percentage distribution			
				Threatened	Inevitable	Incomplete	Missed
J&K	Jammu Med. Coll.		948	17.6	24.8	47.9	9.8
Chandigarh	PGI	Chandigarh	333	5.4	18.9	53.8	21.9
Delhi	Kasturba Hos.	Delhi	2190	37.6	32.7	25.4	4.3
	SJ Hos.	N. Delhi	1024	29.4	41.3	21.1	8.2
	AIIMS	N. Delhi	239	38.1	25.5	28.5	7.9
U.P.	KG MC	Lucknow	621	29.9	4.7	56.7	8.7
	MLN MC	Allahabad	210	29.1	20.0	32.9	18.1
	GSVM MC	Kanpur	249	21.3	9.2	66.7	2.8
	LLRM MC	Meerut	108	22.2	8.3	49.1	20.4
West Bengal	RG KAR MC	Calcutta	873	17.5	4.7	75.6	2.2
	Eden Hos.	Calcutta	837	19.9	9.3	68.5	2.3
	PGMER	Calcutta	191	35.6	6.3	52.4	5.8
Bihar	Patna Med. Coll		115	10.4	0.0	88.7	0.9
Assam	Med. Coll	Gawahati	734	25.8	16.5	54.5	3.3
Orissa	Med. Coll	Cuttack	252	19.1	13.5	55.2	12.3
Rajasthan	SMS MC	Jaipur	1529	40.9	10.9	37.6	10.5
	SP MC	Bikaner	1137	28.5	30.1	33.8	7.6
Gujarat	Baroda Med. Coll.		291	16.2	16.2	54.6	13.1
Maharashtra	KEM	Bombay	1074	61.4	8.3	24.5	5.9
	KEM	Pune	191	38.7	2.1	40.3	18.8
	JJ Hos.	Bombay	218	52.8	20.6	21.1	5.5
	BJ MC	Pune	581	13.8	5.5	71.4	9.3
Goa	MED. Coll	Goa	206	1.9	4.9	73.8	19.4
Tamil Nadu	IOG	Madras	1162	13.5	55.4	24.7	6.4
	KMC	Madras	540	8.5	43.3	42.0	6.1
	KG Hos.	Madras	727	53.2	8.3	27.7	10.9
	RSRM Hos.	Madras	581	22.7	2.2	73.8	1.2
	Madurai Med. Coll.		415	15.2	25.3	45.5	14.0
Kerala	SAT Hos.	Trivendrum	380	45.5	4.5	25.5	24.5
Pondicherry	JIPMER	Pondicherry	289	57.4	14.9	19.0	8.7
Karnataka	JM MC	Belgaum	174	17.8	29.9	40.8	11.5
	TOTAL		18503	29.7	20.5	41.8	8.0

tals from southern region. In eastern region it varied between 11.5 (Patna) to 43.8 (IPGMER, Calcutta) per cent and in western region, between 10.0 (Goa) to 24.3 (Baroda) per cent (Table 1). It was observed that the percentage of admission for abortions was much higher in the hospitals included from the northern region. It also appeared from this data that larger hospital had smaller percentage of admissions for abortions or MTPs as compared to smaller or referral hospital.

From among the abortion admissions 51.8% were for first trimester MTP. The percentage of first trimester MTPs

varied between 32.7 to 80.8 per cent in Northern region, from 42.8 to 76.9 in the eastern region, from 27.5 to 62.3 in the western region and 22.6 to 65.7 per cent in hospitals from Southern region. The second trimester MTPs varied from almost nil at Jammu and KMC, Madras to 23.6 per cent of abortion admissions at Madurai Medical College. The spontaneous abortions accounted for 36.7 per cent of the abortion admissions. The percentage of admissions for spontaneous abortions varied 4.8 (Meerut) to 60.8 per cent at Kasturba hospital Delhi in the Northern region, from 9.2 (Patna) to 48.9 per cent (Eden Hospital, Calcutta) in Eastern region, from 24.8 (BJMC, Pune) to 64.2 per cent (Bikaner) in West and from 17.5 (Trivendrum) to 55.5 per cent (RSRM, Madras) in Southern region. In south, the percentage of admissions for first trimester MTPs was also lower indicating that there the majority of admissions were for abortion problems and not for routine MTP service. The other abortion admissions included 582 (1.21%) cases of septic abortions, 789 (1.65%) ectopic pregnancies and 529 (1.1%) cases of vesicular mole amounting to 3.7% of total abortion admissions (Table 2). Spontaneous abortions comprised of 29.7 per cent threatened abortions, 20.5 inevitable abortions, 41.8 incomplete abortions and 8.0 per cent missed abortions (Table 3).

There were a total of 119 deaths among abortion admissions, which constituted 12.6 per cent of total maternal deaths during one year study period. There were 3 deaths among first trimester MTPs. 1 in second trimester MTPs, 19 in spontaneous abortions, 91 in septic abortions, 2 in ectopic pregnancies and 3 in cases of vesicular mole. The 4 deaths among MTPs and 4 deaths in spontaneous abortion cases were also due to sepsis developed after admission. This gave a case fatality rate of 16.8 (99 deaths in 590 cases of septic abortion) per 100 women among cases of septic abortion. History of interference before coming to the hospital was given by 79 per cent of the septic abortion cases. The mortality rate in those who gave history of interference was 18.3 per cent as compared to 5.4 per cent with no history of interference. About 26.8 per cent of the septic abortions were induced by untrained dai, 28 per cent by doctor, 12.5 per cent by RMP and 11.7 per cent by trained dai, ANM or LHV. Majority of these abortions has taken place in private clinics/nursing homes. Only in 6.4 per cent of septic abortion cases, the abortion was initially induced in the PHC or CHC and 2.2 per cent took place at SC (Table 4).

Table 4:

History of Interference and Referral in Septic Abortion Cases and Deathes

		Cases		Deaths		Moratlity
		No.	%	No.	%	rate\100
Number of women with sepsis:		590*		99*		16.8
H/O interference:	No	74	12.7	4	4.4	5.4
	Yes	460	79.0	84	92.3	18.3
	Not known	48	8.3	3	3.3	6.3
	Not applicable	8*		8*		
Interference By:	Untrained dai	156	26.8	42	46.2	26.9
	Trained dai	39	6.7	6	6.6	15.4
	ANM/LHV	29	5.0	2	2.2	6.9
	RMP	73	12.5	11	12.1	15.1
	Doctor	163	28.0	23	25.3	14.1
	No interference	74	12.7	4	4.4	5.4
	Not known	48	8.3	3	3.3	6.3
	Not applicable	8*		8*		
Place:	SC	14	2.4	2	2.2	14.3
	PHC/CHC	37	6.4	3	3.3	8.1
	Private	168	28.8	25	27.5	14.8
	Hospital	77	13.2	7	7.7	9.1
	Others	164	28.2	47	51.6	28.7
	No interference	74	12.7	4	4.4	5.4
	Not known	48	8.3	3	3.3	6.3
	Not applicable	8*		8*		

*Includes 8 cases who developed sepsis in this hospital

Discussion

The study covers abortion admissions in 31 teaching hospitals from 16 States/Union Territories. On the whole, abortion admissions constituted 18.2 per cent (10.8% MTPs & 7.8% other abortions) of the total obstetric admissions. In another hospital based muticentre study conducted by ICMR, 9 per cent of total obstetric admissions not including MTPs, were for spontaneous abortions (ICMR 1990).

The variations in admissions particularly for hospitals within the same State could be due to different hospital policies. The proportion of admissions for abortion was higher in the Northern region than Southern States of Tamil Nadu, Kerala and the Union Territory of Pondicherry. This could partly be due to the fact that most of the deliveries take place at home in the Northern States whereas in the Southern region they are mostly conducted in hospitals (ICMR 1993).

The date shows that centres with low total obstetric admissions had a higher proportion of abortion admissions than centres with larger numbers of obstetric admission or the referral centres.

Most of the abortion admissions were for MTP (51.8% for 1st trimester & 7.8% 2nd trimester). Second trimester MTPs constituted more than 10 per cent of total of total abortion admissions at 9 of the 31 hospitals. Adequate education of the community regarding early registration of pregnancy and the risks of second trimester MTPs as well as improving the status of the girl child are important to bring down the rate of second trimester MTPs as well as ensuring that abortions are resorted to only as a back up for contraception.

There were a total of 119 deaths due to abortions which constituted 12.6 per cent of all maternal deaths in the study. Of these 99 i.e. 83.2 per cent deaths (including 8 deaths who developed sepsis during hospital stay) were due to septic abortions. Among septic abortion deaths, history of interference was given by 92.3 per cent of the women. Most of these abortions were induced in private hospitals/nursing homes. The case fatality rate for septic abortions was 16.8 per 100 cases. A hospital based study over three different time periods has shown a decrease in overall deaths due to sepsis in hospital admissions but an increase in maternal deaths attributable to septic abortions. The septic abortion deaths for the periods '67-68, '77-'78, and '87-'88 constituted 18.7%,18.6% and 22.2% of the total deaths due to sepsis. The study showed that all the maternal deaths due to sepsis were emergency admissions and all gave history of interference outside (Grover et al. 1991). In the present data also except for 8 cases mentioned above, all the septic abortion admissions were emergency admissions.

Approximately 78 per cent of all septic abortion admissions and 92.3 per cent of the death cases had given history of interference. An earlier ICMR study showed an overall illegal abortion rate of 13.8 per 1000 pregnancies and that, nearly 80 per cent of septic abortions were initially induced at an illegal place (ICMR 1989). In the present study interference was done by RMP or doctor in 40.5 per cent and by untrained dai in 26.8 per cent women. Mortality rate among septic abortion cases was higher in women with history of interference by untrained dai (27%) as compared to trained dai (15%), RMP (15%), doctor (14%) or ANM/LHV (7%). The mortality rate is higher in cases referred from private nursing homes (15%) as compared to larger hospitals (9%). Perhaps facilities for prompt treatment for complications should they arise, also contribute towards better outcomes in induced abortions. Another study of 372 abortions from a PHC area

showed higher complication rate (45.8%) in abortions performed in private setting by MBBS doctor as compared to that in abortions performed in hospitals (28.5%) (Mondal, 1991). It is felt that there is need for continuous flow of information on changing demands, facilities, newer procedures, risks involved for abortions in a family welfare programmes for programme managers and decision makers.

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