



A 17 year review of voluntary termination of pregnancy (MTP)

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OBJECTIVE(S) : To analyze demographic trends in voluntary termination of pregnancy (MTP) over a 17 year period and to study contraceptive acceptance in patients undergoing MTP.

METHOD(S) : Retrospective analysis of 28236 MTP cases from hospital records over a span of 17 years was carried out. Various parameters like age, residence, religion, marital status, educational status, parity, number of male children, weeks of gestation, and contraceptive acceptance were studied.

RESULTS : There was no decline in the rate of induced abortion over the 17 year period. Only 1.1% women were in the teenage group. Most (99.4%) of the women were married. 72.5% women were having two or more living children. 73.7% had one or two male children irrespective of the number of female children. 89.3% had less than 12 weeks pregnancy at the time of termination. 52.7% accepted intrauterine contraceptive device (IUCD). 38.4% underwent sterilization. 1.7% accepted barrier or hormonal methods, while 7.2% did not accept any contraception. In 1988, 82.8% women accepted one of the contraceptive methods, while in 2004, 98% accepted it.

CONCLUSION(S) : Although significant number of women practice contraception, induced abortion is unfortunately used to control family size and for birth spacing. The rate of termination in multiparas has increased over the years. The rate of termination of pregnancy after 12 weeks has declined over the last 3 years.

Key words : induced abortion, sterilization, voluntary termination of pregnancy

Introduction

During the past few decades, there has been worldwide liberalization of abortion laws. To reduce the maternal morbidity and mortality associated with illegal abortions, abortions are legalized in India from 1972¹. Promoting the use of contraceptive methods is needed to decrease the number of abortions some of which are high risk ones and unsafe. Most countries have moderate to high abortion rates reflecting lower prevalence and effectiveness of contraceptive use². Unfortunately abortion has become a common method of limiting and spacing birth, but it should on no account be promoted as a family planning method³. This study was

undertaken to review the voluntary terminations of pregnancy (MTPs) over a period of 17 years.

Methods

This is a retrospective study of 28236 women who underwent MTP in our department during the 17 years period from 1988 to 2004.

The following factors were analyzed – age, residence, religion, education, marital status, parity, number of male children, gestation period at MTP, and contraceptive acceptance.

Suction evacuation under local anesthesia was the method of termination for pregnancies upto 12 weeks. It was preceded by ripening of cervix by medical methods in case of pregnancies above 10 weeks. After 12 weeks, ethacridine lactate, either extraamniotically or intraamniotically, and intraamniotic hypertonic saline were the methods used. All women undergoing termination of pregnancy were counseled for accepting proper contraception. Statistical analysis was done by using Z test for proportion.

Paper received on 29/09/2005 ; accepted on 25/08/2006

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Results

There is no decline in the number of induced abortions over 17 years despite ongoing family welfare activities (Table 1).

Teenagers seeking termination were only 1.08%. Majority of the women (39.6%) was in the age group of 26-30 years. Only 7.8% women were more than 35 years of age (Table 1).

As seen from Figure 1, 91.2% of women were from

urban areas of whom 82.4% were from slums. In 1988, 86.6% women were from urban area and 13.4% were from rural area. While in 2004, 95.4% were from urban area and only 4.6% were from rural area. There was a highly significant lower proportion of rural women in all the years ($Z=8.9795$; $P<0.0001$).

Out of 28236 women, 90.3% were hindus, 8.8% muslims and 0.9% christians.

Though most of the women came from urban slums, only 21.9% were illiterate (unable to read and write)

Table 1. Age (years)

Year	Age (years)					Total
	15-20	21-25	26-30	31-35	>35	
1988	21 (1.40)	379 (24.8)	630 (41.3)	416 (27.2)	81 (5.3)	1527
1989	18 (1.20)	512 (34.5)	600 (40.4)	316 (21.3)	38 (2.6)	1484
1990	28 (1.50)	497 (26.6)	941 (50.3)	343 (18.3)	62 (3.3)	1871
1991	31 (1.80)	448 (26.5)	785 (46.5)	372 (22)	53 (3.1)	1689
1992	21 (1.10)	408 (22.1)	469 (25.5)	796 (43.2)	148 (8)	1842
1993	18 (0.90)	467 (24.6)	601 (31.7)	641 (33.8)	169 (8.9)	1896
1994	17 (1.00)	462 (28.1)	840 (51)	204 (12.4)	124 (7.5)	1647
1995	12 (0.70)	472 (29.5)	719 (45)	304 (19)	92 (5.8)	1599
1996	12 (0.80)	474 (30.3)	595 (38)	337 (21.5)	148 (9.5)	1721
1997	11 (0.60)	710 (41.3)	421 (24.5)	416 (24.2)	163 (9.5)	1599
1998	15 (0.90)	398 (24.9)	656 (41)	388 (24.3)	142 (8.9)	1599
1999	12 (0.70)	442 (25.1)	762 (43.4)	381 (21.6)	164 (9.3)	1761
2000	52 (2.90)	490 (26.9)	680 (37.3)	407 (22.3)	195 (10.6)	1824
2001	9 (0.60)	410 (25.8)	663 (41.6)	361 (22.7)	149 (9.4)	1592
2002	11 (0.74)	321 (21.7)	600 (40.5)	413 (27.9)	135 (9.1)	1480
2003	6 (0.40)	356 (23.7)	610 (40.7)	383 (25.5)	145 (9.7)	1500
2004	12 (0.73)	410 (25.0)	606 (37.0)	425 (25.9)	185 (11.3)	1638
Total	306 (1.08)	7656 (27.1)	11178 (39.6)	6903 (24.4)	2193 (7.8)	28236

Figures in brackets represent percentages.

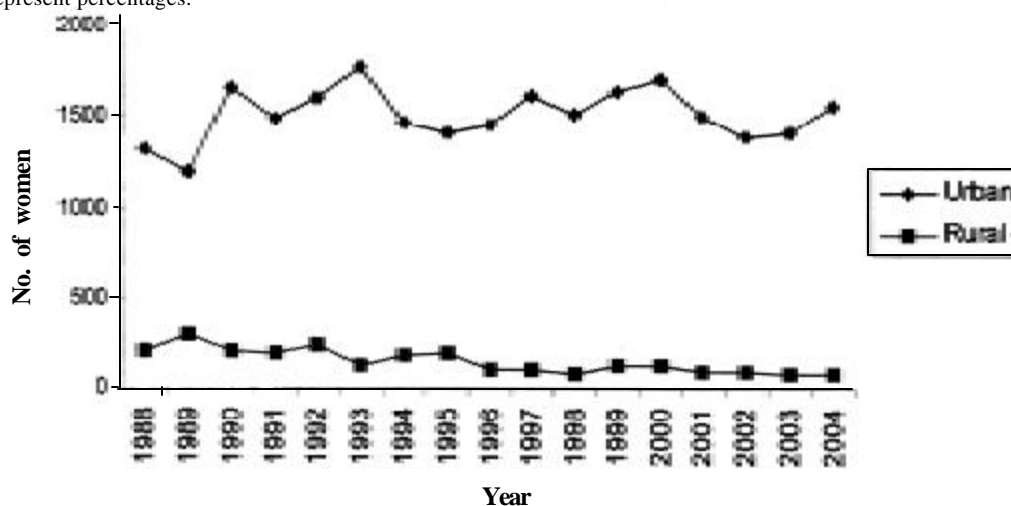


Figure 1. Women undergoing MTP.

while 64% were educated up to secondary school certificate level and 14% had even higher education.

Education status of women undergoing MTP has not changed over the years (Figure 2).

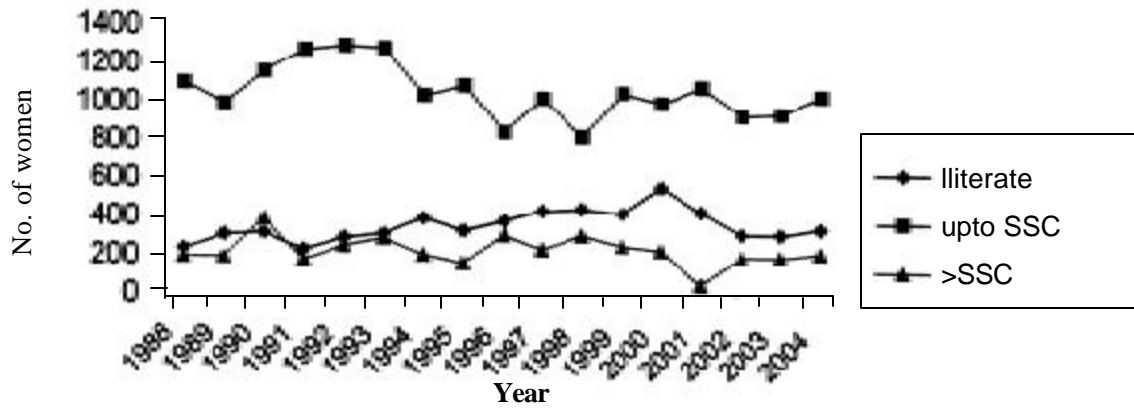


Figure2. Education status of women undergoing MTP.

99.4% women were married and only 0.35% were unmarried while 0.17% were separated from their spouses and 0.08% were widows (Table 2).

no living child were only 0.8% while in 2004, they were 3.1% (Z=4.79, P<0.0001).

Number of living children is shown in Figures 3 and 4. 71.1% women had two or more living children. 2.3% had no living child. In 1988, women undergoing termination with

Distribution of women according to number of male children is shown in Table 3. Women having no male child were 21.9%. 73.7% women had one or two male children irrespective of the number of female children. Women having three or more male children were only 4.3%.

Table 2. Marital status of women.

Year	Unmarried	%	Married	%	Separated	%	Widows	%	Total
1988	6	0.39	1514	99.15	5	0.33	2	0.13	1527
1989	5	0.34	1472	99.19	6	0.4	1	0.07	1484
1990	8	0.43	1859	99.36	3	0.16	1	0.05	1871
1991	6	0.36	1677	99.26	4	0.24	2	0.12	1689
1992	8	0.43	1830	99.35	3	0.16	1	0.05	1842
1993	10	0.53	1882	99.26	3	0.18	1	0.05	1896
1994	4	0.24	1639	99.51	3	0.19	1	0.06	1647
1995	3	0.19	1592	99.56	3	0.19	1	0.06	1599
1996	6	0.38	1556	99.36	1	0.06	3	0.19	1566
1997	8	0.46	1707	99.19	4	0.23	2	0.12	1721
1998	5	0.31	1591	99.5	2	0.13	1	0.06	1599
1999	2	0.11	1759	99.89	0	0	0	0	1761
2000	8	0.44	1813	99.4	1	0.05	2	0.11	1824
2001	5	0.31	1585	99.56	1	0.06	1	0.06	1592
2002	3	0.2	1471	99.39	4	0.27	2	0.14	1480
2003	5	0.33	1491	99.4	3	0.2	1	0.06	1500
2004	6	0.36	1629	99.45	2	0.12	1	0.06	1638
Total	98	0.35	28067	99.42	48	0.17	23	0.08	28236

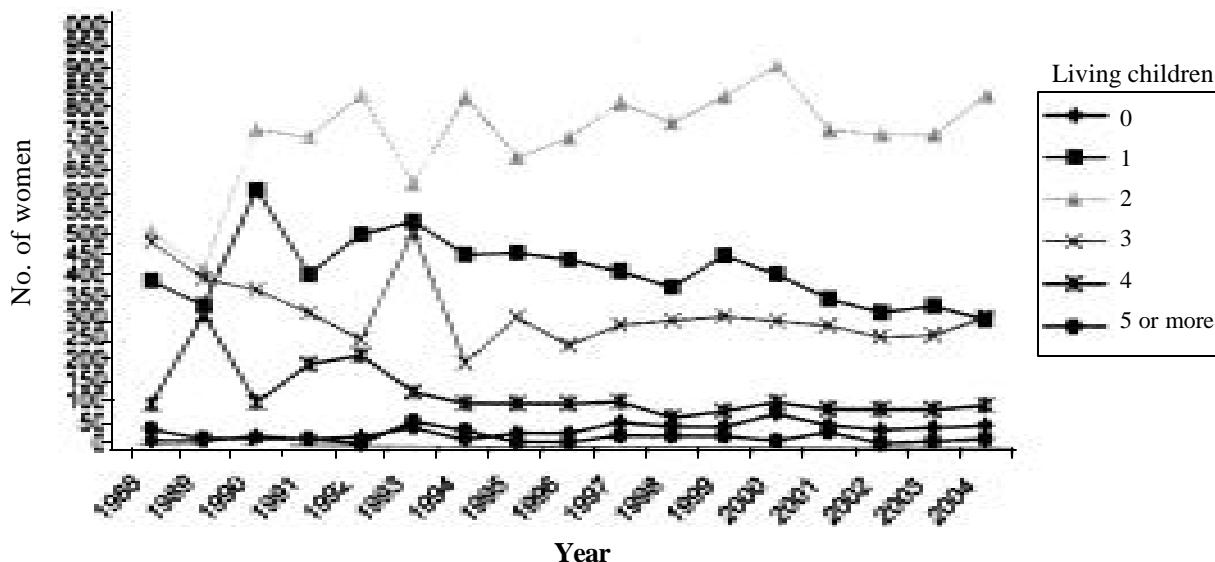


Figure 3. Number of living children

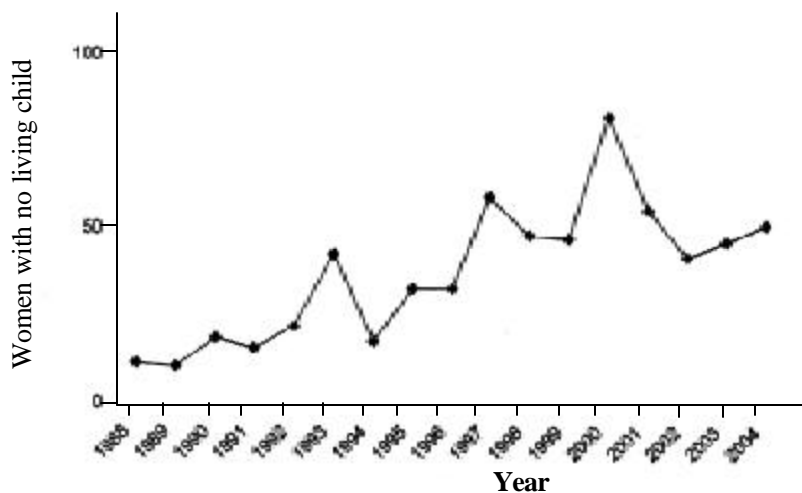


Figure 4. Women with no living child.

Table 3. Number of male children.

Year	0	1	2	3	4	More	Total
1988	299 (19.6)	576 (37.7)	428 (28.0)	165 (10.8)	55 (3.6)	4 (0.3)	1527
1989	460 (31.0)	597 (40.2)	372 (25.1)	47 (3.2)	8 (0.5)	0 (0.0)	1484
1990	612 (32.7)	747 (39.9)	455 (24.3)	54 (2.9)	3 (0.2)	0 (0.0)	1871
1991	471 (27.9)	800 (47.4)	366 (21.7)	47 (2.8)	3 (0.2)	2 (0.1)	1689
1992	637 (34.6)	678 (36.8)	481 (26.1)	35 (1.9)	7 (0.4)	4 (0.2)	1842
1993	322 (17.0)	994 (52.4)	459 (24.2)	106 (5.6)	15 (0.8)	0 (0.0)	1896
1994	387 (23.5)	850 (51.6)	374 (22.7)	30 (1.8)	6 (0.4)	0 (0.0)	1647
1995	251 (15.7)	878 (54.9)	417 (26.1)	42 (2.6)	10 (0.6)	1 (0.1)	1599
1996	345 (22.0)	792 (50.6)	381 (24.3)	45 (2.9)	3 (0.2)	0 (0.0)	1566
1997	380 (22.1)	890 (51.7)	403 (23.4)	43 (2.5)	5 (0.3)	0 (0.0)	1721
1998	369 (23.1)	814 (50.9)	363 (22.7)	41 (2.6)	12 (0.8)	0 (0.0)	1599
1999	329 (18.7)	988 (56.1)	407 (23.1)	31 (1.8)	5 (0.3)	1 (0.1)	1761
2000	350 (19.2)	979 (53.7)	441 (24.2)	49 (2.7)	5 (0.3)	0 (0.0)	1824
2001	304 (19.1)	882 (55.4)	369 (23.2)	32 (2.0)	5 (0.3)	0 (0.0)	1592
2002	232 (15.7)	765 (51.7)	401 (27.1)	64 (4.3)	18 (1.2)	0 (0.0)	1480
2003	230 (15.3)	805 (53.7)	398 (26.5)	47 (3.1)	20 (1.3)	0 (0.0)	1500
2004	220 (13.4)	779 (47.6)	497 (30.3)	130 (7.9)	12 (0.7)	0 (0.0)	1638
Total	6200 (21.9)	13812 (48.9)	7011 (24.8)	1008 (3.6)	193 (0.7)	12 (0.0)	28236

Figures in brackets represent percentages.

89.3% had ≤ 12 weeks of gestation and 10.7% > 12 weeks gestation. In 1988, women with > 12 weeks gestation

were 12% as compared to only 3.4% in 2004 (Figure 5). This difference is highly significant ($Z=9.4505; P<0.0001$).

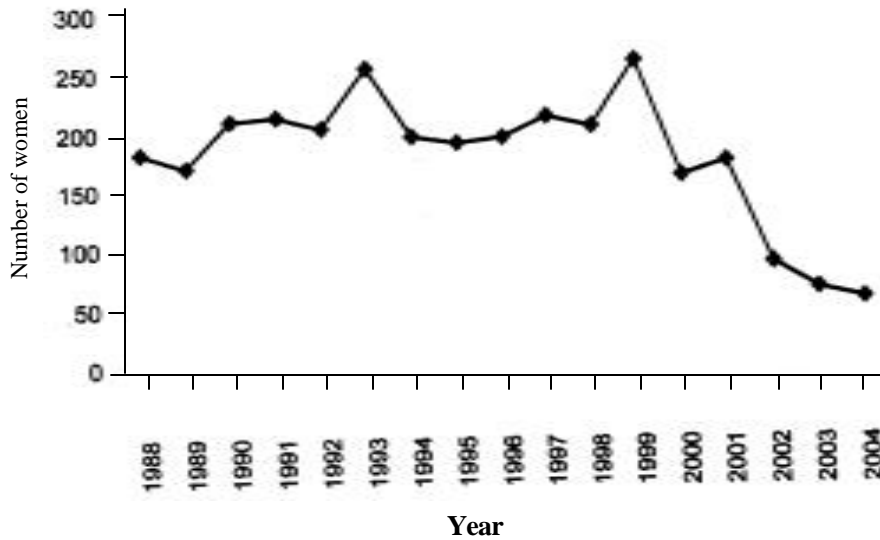


Figure 5. Women undergoing MTP with more than 12 weeks gestation.

Contraceptive acceptance by women undergoing MTP is given in Figure 6. 52.7% women accepted intrauterine contraceptive device (IUCD), 38.4% underwent sterilization, 1.7% accepted hormonal or barrier contraceptives while 7.2% did not accept any type of family planning method. In 1988, 82.8% women undergoing MTP accepted some

contraceptive method compared to 98% in 2004 ($Z=15.3; P<0.0001$). Another interesting observation was that the acceptance of sterilization was 23.4% in 1988 while it was 44.6% in 2004 ($Z=13.9329; P<0.0001$). The rate of acceptance of intrauterine contraceptive device was 58.0% in 1988 while it was 51.5% in 2004.

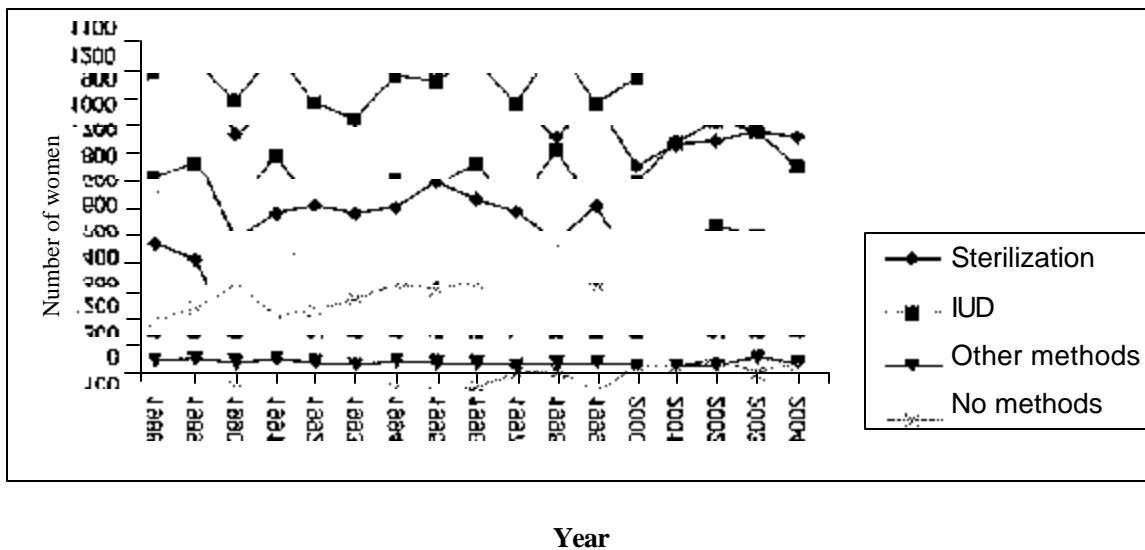


Figure 6. Acceptance of contraception by women undergoing MTP.

The percentage of women undergoing MTP for failure of contraception has remained similar over the years (Table 4).

Table 4. Women undergoing MTP for failure of contraception.

Year	MTP for Contraception failure	Number of MTPs	Percent
1988	371	1527	24.3
1989	352	1484	23.7
1990	515	1871	27.5
1991	365	1689	21.8
1992	429	1842	23.3
1993	482	1896	25.4
1994	371	1647	22.5
1995	302	1599	18.9
1996	315	1566	20.1
1997	373	1721	21.7
1998	329	1599	20.6
1999	361	1761	20.5
2000	414	1824	22.7
2001	315	1592	19.8
2002	334	1480	22.6
2003	351	1500	23.4
2004	326	1638	19.9
Total	6305	28236	22.3

Disussion

There is no decline in the number of women undergoing abortion over the 17 years (Figure 7). An international study

states – it is obvious that increased contraceptive use reduces abortions by enabling women to avoid unplanned pregnancies but our study shows that contraceptive prevalence and abortion rates have risen together as access to effective contraception failed to keep pace with a growing desire for smaller families⁴. Our findings are contrary to this statement. Although the number of contraceptive users at our clinic has increased over the years (Table 5) the number of women undergoing MTP has not increased.

Table 5. Contraception users at our clinic.

Method	Years				
	1990	1996	1999	2003	2004
Sterilization	959	1215	1203	1441	1455
Intrauterine contraception	692	880	1020	1349	1403
Oral pills	649	688	705	1512	1812
Condom	714	821	866	1870	2820
Total	3014	3604	3794	6172	7490

39.6% of the women in our study were in the age group of 26-30 years compared to 53% in Tripathy and Pattnaik’s⁵ study and 43.4% in Verma’s⁶ study. Early marriages are common in our country and most of the women have one or two children by the time they are 25 year old. They now opt for MTP because their husbands refuse to have one more child or because they wish to limit the number of their children or because of economic difficulties or because a contraceptive method has failed. As seen from Table 5, 22.3% of the MTPs in our study were due to failure of contraception.

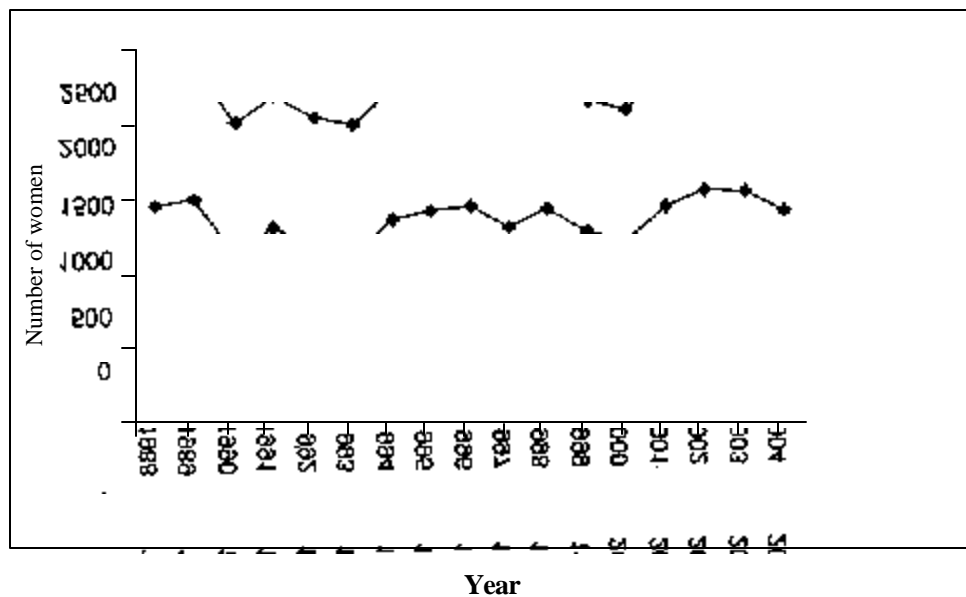


Figure 7. Number of women undergoing MTP.

Most of the women were from urban areas as our hospital is situated in an urban area. Yet the percentage of women from rural areas is highly significantly decreasing ($Z=8.9795$; $P<0.0001$). Over the last 9 years, patients from rural areas have remained between 4.6% and 6.8% only as compared to between 11% and 19.6% in earlier years with the exception 6.4% in 1993. This may possibly be due to the fact that facilities of safe MTP services are now available at grass-root level. Even the medical officers at primary health centers and subcenters are trained in MTP.

There is no significant increase in the number of unmarried, separated and widowed women undergoing MTP over the 17 years (Table 2).

The number of women having two living children was 44.6%. Verma⁶ observed that 90.7% women were para 2 and above. Tripathy and Pattnaik⁵ observed that 76.5% women had parity of above two. Most of the patients in our study were in the age group of 26-30 years and had parity two because with this parity, they didn't want more children. Besides, because of their and their children's young age they did not opt for sterilization previously.

There is highly significant increase in percentage of women undergoing MTP without any living child ($Z=4.79$; $P<0.0001$). This may be attributed to increased level of education and a desire to go on with their studies and career. Another reason is that awareness about availability of safe services for MTP has increased over the years. Even though the rate of termination has increased in nulliparous patients over 17 years, the overall rate is low in this parity in comparison to that in other parities as the family members and the doctors discourage termination of first pregnancy.

21.9% of women had no male child while 73.7% had one or two male children. This indicates that after having one or two male children, most of the women do not want more children and opt for MTP with or without sterilization. Only 4.3% women had three or more male children.

Only 10.7% of women in our study had > 12 weeks of gestation (Figure 5). In 1988, 12% of women undergoing MTP had > 12 weeks pregnancy. This percentage was only

3.4% in 2004, a highly significant decrease ($Z=9.4505$; $P<0.0001$). It has mainly decreased during the last 3 years of study. This may be due to awareness of and ability to reach safe termination services in time and may perhaps be also an impact of PNDT act prohibiting prenatal sex determination.

Tripathi and Pattnaik⁵ observed 4.2% women with ≥ 12 weeks of pregnancy and Verma⁶ observed 17.4% women with ≥ 12 weeks of gestation.

Acceptance of contraception along with MTP has been increasing over the years. The rate of sterilization with MTP has increased significantly over the years. The rate of IUCD insertion with termination of pregnancy hasn't changed significantly over the years. MTP has played a great role in counseling women for acceptance of contraception particularly sterilization.

Conclusion

Although significant number of women practice contraception MTP also is used to control family size and for birth spacing. Incidence of MTP with zero parity has increased over the years. MTP gives an important opportunity for counseling the women for acceptance of some contraception including sterilization. The rate of termination of pregnancy after 12 weeks has declined over the last 3 years. Preference for male child still persists in our country.

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