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## Original Research Article

# An analysis on choices of contraception

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### ABSTRACT

**Background:** Contraception is a matter of choice by the end users. The choice varies time to time. Present study tries to find out which type of contraceptive measure people prefer nowadays.

**Methods:** This is a retrospective observational study conducted at College of Medicine & JNM Hospital, WBUHS, Kalyani, India. The contraceptive performance data of the hospital are collected from the computerised data entry register. The study period was from January 2015 to December 2017. Total number of different contraceptive methods (OCP, condom, IUCD, MTP, tubal ligation etc.) accepted by the people were found out. Data was then analysed in comparison to total number of contraception with each other by student 't' test and chi square test.

**Results:** It is found that condom use is significantly increased from 2015 to 2017 ( $p < 0.00001$ ). OCP use is significantly decreased from 2015 to 2017 ( $p < 0.00001$ ). IUCD insertion significantly increased from 2015 to 2017 ( $P < 0.00001$ ) and tubal ligation significantly decreased from 2015 to 2017 ( $p < 0.00001$ ).

**Conclusions:** Contraception choice preference is shifting towards LARCs (long acting reversible contraceptives).

**Keywords:** Condom, IUCD, LARCs, OCP

### INTRODUCTION

Contraception is a matter of choice by the end user. Different methods are available with their respective benefit. Cafeteria approach helps the eligible couple to decide about their contraceptive method after knowing the pros and cons of different methods.

Contraceptives >99% effective if used correctly: contraceptive implant, intrauterine system (IUS), intrauterine device (IUD), female & male sterilisation; Contraceptives >99% effective if always used correctly, but <95% effective with typical use: contraceptive injection, combined oral pill (OCP), progestogen-only pill, contraceptive patch, vaginal ring; contraceptives 99% effective if used according to instructions: symptothermal method of natural family planning; Contraceptives 98% effective if used correctly: male

condom; contraceptives 95% effective if used correctly: female condom; contraceptives 92-96% effective if used correctly: diaphragm or cap with spermicide.<sup>1</sup>

Apart from these knowledge other factors also influence the choices of contraception e.g. influences from social media and friends, their partners and religious belief, educational status etc.<sup>2,3</sup> In the TRIO study at Kenya and South Africa uses of daily OCP, monthly injections and monthly vaginal ring were compared and it was found that mean choices for monthly injections were significantly higher [4.3 (SD=1.0)] in compare to the OCP [3.0 (SD=1.3)] and vaginal rings [3.3 (SD=1.4)] ( $p < 0.001$ ); mean choices for vaginal rings were significantly higher than for OCP ( $p = 0.013$ ).<sup>4</sup> Present study is conducted to know what the couples attending our hospital prefer these days.

## METHODS

This is a retrospective observational study conducted at the College of Medicine and JNM Hospital, WBUHS, Kalyani, Nadia, West Bengal, India. The study period was from January 2015 to December 2017. The data was obtained from the computerized data entry register of the hospital. Yearly data (January–December) of 2015 and 2017 were collected from the HMIS (Health Management Information System) sheet for annual performance comparison. Inclusion criteria were data entered under the “Family planning” heading of the HMIS sheet. Rest of the data were not relevant to the contraception, hence excluded. They were distributed under different types of contraception in ‘x’ axis and years and months in ‘y’ axis. Data was then evaluated by the student ‘t’ test and Chi-square test and ‘p’ values obtained. Student ‘t’ test

was applied while respective contraceptive methods were compared with the total contraceptive uses e.g. IUCD with total contraceptive uses, OCP with total contraceptive uses etc. and Chi-square test was applied while comparing the IUCD with OCP. The study is in accordance with the Institutional Ethics Committee.

## RESULTS

In 2015 barrier contraceptives distributed was 22617, OCP cycle (1 strip = 1 cycle) distributed was 14360, IUCD inserted 230, MTP done 55 and tubal ligation performed in 653 women. At a glance it appeared that couples preferred combined oral contraceptive pills, condoms at that time and good numbers of women were undergoing tubal ligation. Month wise performance is showed in the Table 1.

**Table 1: Contraception 2015.**

Year and Month	Condom (pieces distributed)	OCP (cycle distributed)	IUCD						MTP	Tubal ligation			
			Interval	PPIUCD	PAIUCD	Total	IUCD removal	Inter val		Post abortion	Cesarean	Total	
2015													
Jan	2500	520	13	0	0	13	0	5	32	0	21	53	
Feb	2010	1700	9	0	0	9	2	8	21	0	41	62	
Mar	2260	1650	16	0	0	16	0	6	26	0	43	69	
Apr	2560	1510	9	0	0	9	0	4	31	0	21	52	
May	2340	1480	4	16	0	20	0	4	33	0	23	56	
Jun	1275	960	5	15	0	20	0	4	27	0	25	52	
Jul	2130	1420	6	0	0	6	0	4	20	0	31	51	
Aug	2010	1040	4	32	0	36	0	5	34	0	23	57	
Sep	2010	1020	5	25	0	30	0	4	25	0	31	56	
Oct	2012	1024	7	25	0	32	3	5	21	0	36	57	
Nov	0 (short supply)	996	8	13	0	21	0	3	17	0	26	43	
Dec	1510	1040	7	11	0	18	1	3	20	0	25	45	
Total	22617	14360	93	137		230	6	55	307		346	653	

The total number contraception had been increased from 37915 (2015) to 52892 (2017). In 2017 the total condom pieces distributed was 42297, OCP cycle distributed 6077, number of women received IUCD was 4015, MTP was done in 110 cases and tubal ligation was performed in 393 women. At a glance, in 2017, couples preferred condom and IUCD than OCP and tubal ligation. Month wise performance is showed in Table 2.

While comparing the total contraception with the individual type of contraception it was found that 1) use of condom is significantly increased from 2015 to 2017 ( $p < 0.00001$ ); 2) OCP use is significantly decreased from 2015 to 2017 ( $p < 0.00001$ ); 3) IUCD insertion is significantly increased from 2015 to 2017 ( $P < 0.00001$ ); 4) Tubal ligation is significantly decreased from 2015 to 2017 ( $p < 0.00001$ ). As such MTP numbers are less in our institution, still there is mild increase in number from

2015 to 2017 ( $p < 0.05$ ). While comparing data of IUCD and OCP among themselves, being more commonly used temporary method with less failure rate, it was found that IUCD insertion was significantly increased from 2015 to 2017 ( $p < 0.00001$ ).

## DISCUSSION

India, the second most populous country of the world, harbours 17.5% of the world’s population. Coincidentally it also houses almost 17.3% of the world’s protected couples and 20% of world’s eligible couples with unmet need.<sup>5</sup> So propagating correct information about different types of contraceptive methods is very essential and which has been done effectively throughout the year. As a result people are gaining more and more information about different types of contraception – their indications, contraindications, long term benefits, complications etc.

This knowledge is helping them to take justified decision about the type of contraception they want. It has been observed that there is a shift of choices of the couples regarding the type of contraception—more in favour of long acting reversible contraception.

Long-acting reversible contraceptives (LARCs) are very effective methods of contraception. LARCs include the copper T (Cu T 380A), LNG IUS (Levonorgestrel intrauterine system) and hormonal implant which are

effective for 10, 4 and 3 years respectively. They can prevent unwanted pregnancy up to 20 times better than oral combined contraceptive pills, patches and vaginal rings.<sup>6</sup> In the US increases in the prevalence of LARC uses was observed even among sexually experienced nulliparous women [2008 to 2012 (0.8% vs. 3.8%)  $p<0.0001$  and 2012 to 2014 (3.8% vs. 5.7%)  $p=0.09$ ].<sup>7</sup> LARCs methods can bring 'typical use' failure rates more in line with 'perfect use' failure rates.<sup>8</sup>

**Table 2: Contraception 2017.**

Year & Month	Condom (pieces distributed)	OCP (cycle distributed)	IUCD			Total	IUCD removal	MTP	Tubal ligation			
			Interval	PPIUCD	PAIUCD				Interval	Post abortion	Cesarean	Total
2017												
Jan	4800	380	4	274	0	278	0	3	0	0	13	13
Feb	4200	330	18	349	0	367	2	3	0	0	20	20
Mar	4500	360	2	348	0	350	0	11	0	0	22	22
Apr	3200	320	4	225	0	229	2	6	8	0	31	39
May	3400	740	5	122	6	133	1	8	11	0	40	51
Jun	4050	610	4	226	8	238	2	16	5	1	23	29
Jul	1485	598	19	319	0	338	7	6	13	1	34	48
Aug	2160	565	3	435	5	443	5	12	4	4	35	43
Sep	2172	544	4	464	0	468	6	16	5	2	35	42
Oct	4000	550	8	408	0	416	7	12	0	0	29	29
Nov	4050	560	7	415	0	422	8	9	0	0	31	31
Dec	4280	520	7	326	0	333	10	8	3	0	23	26
Total	42297	6077	85	3911	19	4015	50	110	49	8	336	393

In 2008, the Government of India took step to revitalize the postpartum intrauterine contraceptive device (PPIUCD) services. This step was needed to address the high unmet need for postpartum family planning services beyond sterilization, and help improve spacing between pregnancy, which would contribute in improving maternal and child morbidity and mortality status throughout the country.<sup>9</sup> Government is supplying Cu T 380A for PPIUCD. The overall acceptance rate among those eligible for PPIUCD was 39% (95% confidence interval [CI]: 35.1-42.9).<sup>10</sup> Women undergoing cesarean section were more frequently accepting PPIUCD than the women who had normal vaginal delivery. Majority (67.12%) accepters told that they accepted IUCD as it is a reversible method.<sup>11</sup> Women's satisfaction after wearing PPIUCD was 91.7% after 6 weeks, 92.9% after 3 months, and 95.6% after 6 months.<sup>12</sup> Nearly all women (99.6%) were satisfied with IUCD at the time of insertion and 92% were satisfied at 6 week follow-up visit.<sup>13</sup> Continuation rate after 1 year was 91%.<sup>14</sup> PPIUCD is an appealing approach and may become the best choice as post-partum contraception after vaginal as well as cesarean delivery.<sup>15</sup>

In present study also IUCD insertion is significantly increased from 2015 (230) to 2017 (4015) ( $P<0.00001$ ).

Thanks to our govt. Family planning counsellor and counsellor of FIGO-FGOGSI PPIUCD project for sharing more and more knowledge about different types of contraception among the people via counselling every day. Both the team are doing excellent work.

Contraceptive choice project in St. Louis revealed that when provided with proper counselling and their choice of contraceptive method at no cost, 67% of eligible women chose an IUCD or implant, as compared with less than 6% choosing these methods in the general population.<sup>16</sup> The goals of the Healthy People 2020 initiative include a 10% increase in the proportion of pregnancies that are intended and a 10% decrease in the number of conceptions that occur within 18 months after a woman's previous delivery. Provision of contraception as a preventive care service and eliminating its cost sharing will be an instrumental step toward achieving this goals.<sup>17</sup>

Department of Health & Family Welfare, Govt. of India, has already started the free supply of Cu T 380A, Cu T 375 along with existing free supply of condom, OCP etc. So knowing the contraception choices of the people is going to help the local administrator to get requisite supply of the respective types of contraception in advance

so that adequate family planning care can be continued smoothly.

The methods which offer long-term protection and need not to be remembered by the couple everyday/time are gaining popularity nowadays. But it should be kept in mind that condom protect against STIs (sexually transmitted diseases) also, whereas other methods does not have this property. So ideal situation would be use LARCs and simultaneously use condom during the time of partner's STI.

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