

ORIGINAL ARTICLE

LARC Acceptance, Subdermal Implant Uptake, And Follow-Up Response in Women Seeking Contraceptive AdviceRakhshanda Neelofar¹, Shama Jogeza², Fozia Muhammad Bakhsh³, Safia Bibi⁴, Pari Gul⁵**ABSTRACT**

Objectives: To determine the acceptance of Long-Acting Reversible Contraceptives (LARC) and uptake of subdermal implants and follow-up response in women seeking contraceptive advice.

Study Design: Observational case series.

Place and Duration of the Study; Gynecology OPD and family planning center Bolan Medical Complex Hospital Quetta, January 02, 2018, to December 30, 2019.

Materials and Methods: Women found eligible for Long-Acting Reversible Contraceptives, amongst those seeking contraceptive advice, were included in this study after informed consent. The women found eligible were given the choice of Long-acting contraceptives. Women, who opted for Intrauterine Contraceptive Device were referred to the family planning center and those who accepted subdermal implants were sent to gynae minor operation theater after informed consent. Microsoft Excel was used for the analysis of data. Mean and standard deviation was calculated for quantitative data. Frequencies and percentages were calculated for qualitative data.

Results: A total number of 3670 women seeking contraception were advised long-acting reversible contraceptives. Whereas 1423(38.77%) accepted long-acting reversible contraceptives amongst the women who opted for it, 64.23% accepted subdermal implants and 35.76% opted for intrauterine contraceptive devices. Out of 1423 women who accepted long-acting reversible contraceptives, only 25% turned out for follow-up. Discontinuation of long-acting reversible contraceptives was observed in both subdermal groups (8.09%) and intrauterine contraceptive device groups (4.51%) during 1st year of initiation.

Conclusion: Acceptance of long-acting reversible contraceptives (LARC) and uptake of subdermal implants is reasonable among the women seeking contraceptive advice. These contraceptive methods may be offered as first-line contraceptives for most women provided that the cost barrier is eliminated.

Key Words: Contraception, Family planning, IUCD, LARC, Subdermal Implants.

Introduction

Rapid population growth remains a major concern in our country. In Pakistan, the annual population growth rate is 1.41% and the fertility rate is 2.55 children born/women.¹ High fertility rate and limited access to contraception are the main causes of rapid population growth. Pakistan's population growth rate has declined from 3% in the late 1980s to the present estimated level of 1.41% per annum but it remains unacceptably high. The prevalence of

unintended pregnancies in Pakistan is reported to be between 16-46%.² The contraceptive prevalence rate is 34.2% in Pakistan.¹ In different parts of the country use of contraceptives shows uneven progress with high unmet needs for family planning.

Intrauterine contraceptive devices and subdermal implants are the most effective methods of long-acting reversible contraception.² The long duration of action of long-acting reversible contraceptives (LARC), (3 to 10 years) makes them highly desirable methods of contraception, as they do not require maintenance, once in place. Recent evidence shows that LARC methods are safe and convenient to use.^{3,4,5}

These methods are highly effective with a low failure rate and the additional advantage of being cost-effective in the long run.^{3,7} The World Health Organization (WHO) estimates that only one unintended pregnancy occurs among every 2000-implant user in the first year of use.⁸

Currently, three LARC methods are available in

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Pakistan i.e., Cu-IUCD, the levonorgestrel intrauterine system, and the etonogestrel implant. FDA has approved the Cu-T380A for up to 10 years, the levonorgestrel intrauterine system for up to 5 years, and the etonogestrel implant for up to 3 years of continuous use. These methods do not contain estrogen and may be used in conditions where estrogen is contra-indicated like in women with uncontrolled hypertension, smokers aged >35 years, women with a personal history of a venous thrombotic event, or a family history of inherited thrombophilia.⁹

Unplanned pregnancy continues to be a major problem in Balochistan due to limited access to family planning services. Long-acting reversible contraceptive methods are less frequently used in Balochistan. By increasing the uptake of long-acting reversible contraceptive methods, the high rate of unintended pregnancies can be reduced. Keeping in view the low contraceptive prevalence rate and high unmet need, much is needed to be done by the state to avoid unintended pregnancies and associated complications. The capital investment in this regard needs to be increased to fill the gap between demand and supply. Data regarding acceptance and uptake of the LARC in Baluchistan was not available in the literature. The objectives of this study were to determine the acceptance of long-acting reversible contraceptives, subdermal implant uptake, and subsequent follow-up response in women seeking contraceptive advice at Bolan Medical Complex Hospital (BMCH) OPD. This study aimed to provide baseline data to the service providers and policymakers to plan appropriate steps to address the problem of rapid population growth. So, research was planned to determine the percentage acceptance of Long-Acting Reversible Contraceptives (LARC) and uptake of subdermal implants and follow-up response in women seeking contraceptive advice.

Materials and Methods

This observational study was carried out at Gynecology OPD of Bolan medical complex hospital Quetta. All women attending gynae OPD and family planning center for contraceptive advice from January 02, 2018, to December 30, 2019, were included. Women with risk factors for LARC were excluded from the study. All possible ethical issues

were addressed, and approval was obtained from the Institutional Ethical Review Board prior to the conduction of the study. Informed consent was taken from respondents. Data was collected on the prescribed form by the researchers themselves. Women without any risk factors and genuine candidates for LARC were given the choice of Long-acting contraceptives. They were explained about cost, advantages, and possible risks of LARC. The patients who opted for IUCD were referred to the family planning center and those who accepted subdermal implants were sent to gynae minor OT after informed consent., IUCD was inserted in the family planning center by trained persons using the standard procedure under the supervision of the in-charge chief medical officer. Subdermal implants were inserted in minor gynae OT by consultant gynecologists, senior medical officers, and residents (under supervision) using standard methods. The women were called for follow-up after a month and then at 3 monthly intervals for 12 months to collect data regarding side effects of LARC (menstrual irregularities) and to record their compliance with the chosen method. MS Excel was used for the analysis of data. Mean and standard deviation was calculated for quantitative data. Frequencies and percentages were calculated for qualitative data.

Results

A total number of 3670 women seeking contraception, were advised long-acting reversible contraceptives. As shown in Table-I, LARC was accepted by 1423 (38.77%) women and 2247 (61.22%) refused it. Amongst the women who opted for LARC, 914 (64.23%) accepted subdermal implants and 509 (35.76%) opted for IUCD. Out of 1423 women who accepted LARC, 356 (25.01%) turned out for follow-up, while 1067 (74.98%) lost from follow-up. [Table-I] Discontinuation of LARC was observed in both subdermal groups [74 (8,09%)] and IUCD groups [23(4.51%)] during the 1st year of their initiation.

Discussion

Pakistan has the second-highest fertility rate in South Asia.¹³ The contraceptive prevalence rate is low and the unmet need for family planning is very high in Pakistan (20%).¹¹ A study conducted by ASIF, M.F et al revealed that the use of contraception was lowest in Baluchistan with a contraceptive prevalence rate of 29%.¹²

Table I: Acceptance, Uptake of Different Methods, Follow Up Response, and Discontinuation of LARC

Acceptance and Uptake of Different LARC Methods			
LARC Accepted	LARC Refused	IUCD Intrauterine Contraceptive Device	Subdermal IMPLANTS
1423 (38.77%)	2247(61.22%)	509(35.76%)	914(64.23%)
Follow up Response and Discontinuation of LARC			
Turned out for follow up	lost from follow up	Intra-Uterine Contraceptive Device (IUCD)	Subdermal Implants
356 (25.01%)	1067(74.98%)	23(4.51%)	74(8.09%)

During the study period, 3670 eligible women were included in the study. After thorough counseling by gynecologists, medical officers, and post-graduate residents, 38.77% of them accepted the LARC for birth spacing. The LARC acceptance was found higher in our study (38.77 %) than previously reported by the National Institute of population study (26%).¹³ That reveals a slow rising upward trend in uptake of LARC over 7 years. A study conducted by Adedini et al also reported a slow but upward trend in uptake of LARC as in Malawi, the LARC uptake increased from 0.46% in 2004 to 9.76% in 2016 and in Zimbabwe, from 1.04% in 2006 to 8.51% in 2015.¹⁴

LARC was refused by 61.22 % of the study group due to fear of complications. The results of our study are comparable with the findings of a study conducted by Sedgh G et. al., who reported fear of side effects as a cause of unmet need in 25% of the Asian population.¹⁵ Regarding subdermal implant uptake, it was found to be 64.23%. To our surprise, most women preferred subdermal implants over IUCD, as 35.76 % of the study population accepted IUCD. A study conducted by Khan et al also revealed that most of the women were reluctant to choose IUCD.¹⁶ Subdermal implants are relatively new methods with fewer myths surrounding them. Jacobstein et al., also reported that an increase in the use of implants has largely improved the uptake of LARC in Africa.¹⁷ Subdermal implants were mostly chosen by young women. The women in the study group were aged between 26-43 years and their parity ranged from para 3-11. The satisfactory uptake of the subdermal implants in this study can be attributed to the free provision of contraceptive commodities by NGOs during the study period. The cost was found to be the major constraint in the uptake of the subdermal

implants. We have observed that the women who were initially interested in subdermal implants, knowing the cost of the implant never showed up. By eliminating the cost barrier, the uptake of LARC may be increased. As reported by Guiahi M that after the implementation of the Affordable Care Act (ACA) in America, the upfront cost of LARC is reduced which resulted in a substantial increase in uptake of LARC.¹⁸

Follow-up response was very poor, as only 25.01% turned out for follow up and 74.98 % were lost from follow-up. Due to poor follow-up response, the continuation rate could not be assessed but it may be assumed satisfactory from the fact that the women, who turned up for follow-up were having menstrual irregularities. The LARC discontinuation rate recorded during the study period was 8,09% in the subdermal implant group and 4.5% in the IUCD group. The results of our study are comparable with the results of a study conducted by Lendvay et al., who reported a 10% discontinuation rate among subdermal implant users¹⁹ while the discontinuation rate among IUCD users reported in our study is lower than the rates recorded by another study conducted by Azmat SK et al. (4.5% vs 16.3%).²⁰

The limitation of our study is that the women's satisfaction and continuation rate could not be assessed due to poor follow-up response, which may be due to lack of adaptation of a convenient and efficient mechanism for follow-up.

The health sector in Pakistan is facing many challenges due to a lack of effective planning and inadequate performance. The results of our study will provide information to the policymakers in decision-making regarding the provision of contraceptive services in our province. Keeping in view the poverty and poor access of women to health facilities, the provision of free commodities may further increase the uptake of highly effective LARC and decrease the number of unplanned pregnancies. High maternal mortality in our country especially in Baluchistan is mostly due to unintended pregnancies in women of high parity, in addition to lack of well-equipped health care facilities. Efforts are needed to improve women's access to contraceptives. There seems to be a dire need to train the health care providers and to reduce the upfront cost of the LARC. The capital investment in this regard needs to be increased and concrete actions must be taken to

control the population explosion. It will be beneficial to find out the trends and determinants of uptake of LARC in Baluchistan in the future.

Conclusion

Acceptance of long-acting reversible contraceptives (LARC) and uptake of subdermal implants is reasonable among the women seeking contraceptive advice. These contraceptive methods may be offered as first-line contraceptives for most women provided that the cost barrier is eliminated.

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CONFLICT OF INTEREST

Authors declared no conflicts of Interest.

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DATA SHARING STATEMENT

The data that support the findings of this study are available from the corresponding author upon request.

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