"Exploring the Safety and Efficacy of PPIUCD Contraception: A Comprehensive Study"

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ABSTRACT

BACKGROUND: Pakistan faces a significant maternal mortality rate, prompting a need for effective contraceptive methods to reduce childbirth-related complications. Postpartum intrauterine contraceptive device (PPIUCD) emerges as a promising solution to prevent unexpected pregnancies and associated risks.

METHODS: This study, conducted at the Sindh government hospital, involved counseling a total of 7314 women, out of which 5682 accepted PPIUCD while 1632 declined. The study observed a total of 1441 insertions, with a follow-up continuation rate of 91%.

RESULTS: The findings suggest that PPIUCD is not only safe but also highly effective, with a notable retention rate. Although the expulsion rate was observed, it remained manageable and could be further minimized with enhanced training and practice. Despite relatively low levels of awareness, the high acceptance rate underscores the importance of PPIUCD as a contraceptive option.

CONCLUSION: The study highlights the importance of promoting awareness about PPIUCD among the general public. To maximize its benefits, the government should prioritize the development of strategies to disseminate information through various media channels. By increasing awareness and accessibility, PPIUCD can play a crucial role in reducing maternal mortality and improving reproductive health outcomes in Pakistan.

KEYWORDSL: PPUICD, Postpartum, contraceptive, hormones, Awareness

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Back Ground

Postpartum IUD is the only long acting, reversible strategy, that does not meddle with breastfeeding that can be provided before the patient leaves the birthing facility and requires no transition (from LAM to hormonal contraceptives). In Embu, PPIUCD service was started in 2007 and insertions are generally done by midwife/nurses 'champions' through manual insertions. (Barbara Deller, 2010)

Introduction

A large number of women die during child birth in Pakistan. United Nation MDG targets to reduce this number to provide better maternal and child health. A decline in maternal and child mortality can be observed with the usage of family planning tools. This can also be achieved by having a two-year interval between two pregnancies, whereas, short interval disturbs mothers' health (Cleland J, et al 2006; Rutstein S, 2008). Present population of Pakistan is 193,432,298 based on latest united Nation estimates. Pakistan is worlds' sixth most populated country, urban population has increased to folds due to lack in birth control knowledge (Khatoon, A. et al, 2012). The fertility rate in Pakistan has risen, as per demographic health survey Pakistan's' fertility rate is 4.1 children per woman (Khan, A., Hashmi, H. A., & Naqv i, Z. 2011). This outburst in population is because of unawareness and non-acceptance of birth control methods. Some communities in Islam refuse it as per laws demonstrated by Islam.

Various safe and effective methods have now been established, women can utilize them at various stages of reproductive life, intervals for their family planning's. Some of them can be used directly at postpartum, PPIUCD is one of them. Consequences of a short birth to birth interval include, low birth weight, preterm birth and infant mortality (Zhu BP, et al. 2001; DeFranco EA, et al.2007). Therefore, to overcome these problems, there is a need to develop effective methods for birth control.

Intra-uterine contraceptive device can be inserted within 48 hours of pregnancy as declared by WHO, called as postpartum intrauterine contraceptive device (PPIUCD). It can also be inserted within four weeks after birth (WHO, 2015). It is one of the most effective methods to restrict child birth. Unexpected pregnancies and the complications caused by them can be avoided by using PPIUCD. Sneha Tyagi performed her study on 526 women to evaluate the acceptance level in Indian population to use it. She concluded that there was 30% acceptance and the remaining denial is due to fear of pain and bleeding (Tyagi, S. et al, 2016). Inserting the IUD in the immediate postpartum period (post placental, intracesarean) saves time for both the woman and provider—because the procedure is conducted in the same setting and involves only a few minutes of additional time. Although inserting the IUD in the early postpartum period (first 48 hours) does require a separate clinical procedure, it does not require an additional visit—which increases the likelihood that the woman will have it done.

Purpose

National Committee for Maternal and Neonatal Health (NCMNH) is the technical and advisory arm of the Federal Ministry of National Health Services, regulations and coordination, Government of Pakistan. For improving maternal health and family welfare, spacing of pregnancies is one of the

areas of NCMNH's activities. It has been integrating provision of immediate postpartum contraception through intrauterine contraceptive device in the existing maternity services of selected public and private health facilities, in Sindh and Punjab.

Methodology

The observational study, PPIUCD intervention at Sindh Government Hospital. Copper bearing IUD TCu 380A is used in this procedure. IUCD is placed in uterus by a Health care provider.

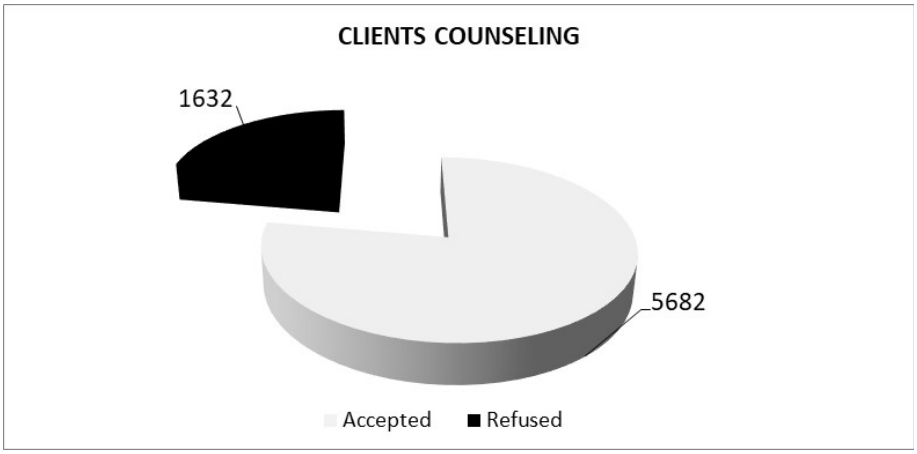
INCLUSION CRITERIA:
The copper IUD is a safe and simple method and is especially convenient for certain categories of women.

- Women who have one or more children and who want to space their children.
- Women who want an effective contraception for several years.
- Women who are forgetful of using the daily contraceptives.
- A unique choice to women taking regular medications that interacts with hormonal contraceptives.
- Women whose domestic arrangements lack the privacy for storing or using other methods of contraception.
- Women who have difficulty in obtaining regular contraceptive supplies.
- All women who delivered either by vaginally or by cesarean section who had opted for the procedure were included in the study.

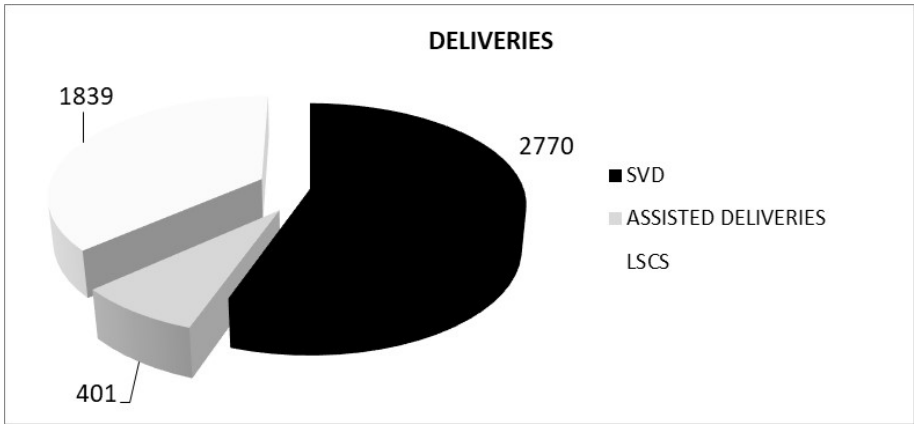
EXCLUSION CRITERIA:
Those with unusual bleeding with active pelvic infection and women with pregnancy are excluded.

Results

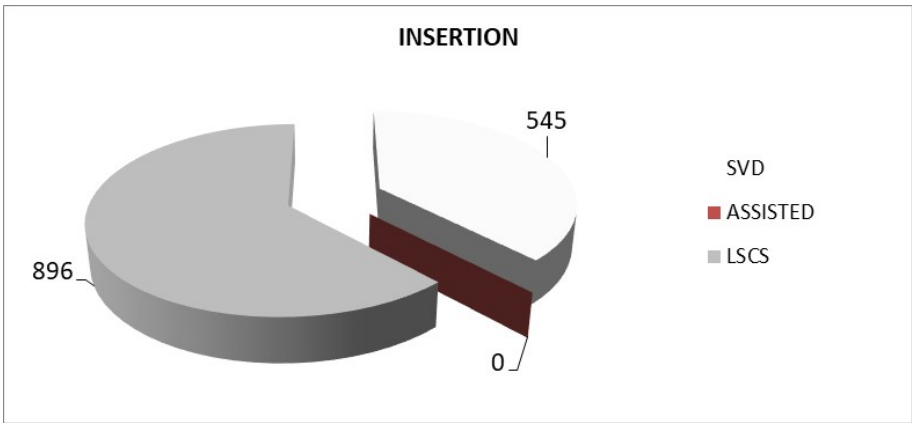
Result shows that total 7314 Clients counseled out of which 5682 clients accepted and 1632 clients refused. (Fig: 1). Total deliveries were 5010, out of which SVD were 2770, assisted deliveries were 401, and LSCS were 1839. (Fig: 2). Total Insertions reported were 1441 out of which SVD were 545, Assisted were 0, and in LSCS were 896 insertions. (Fig:3). Total 785 clients were followed till 6 months' post insertion. Out of which 24(3%) were expulsed & 47(6%) were removed due to various reasons. The continuation rate is 91% of those followed up.



(Figure: 1); clients counseling shows 5682 acceptations and 1632 rejections.



(Figure: 2); shows 2770 SVD's and 1839 assisted deliveries.



(Figure:3); shows insertions of PPIUCD in which LSCS were 896 and 545 SVD's.

REASONS FOR IUCD REMOVAL:

1 removed due to non-fundal placement of IUCD. 5 were removed due to perceived Infection (Vaginal discharge, pain during sex). No Pregnancy with IUCD in situ was reported. 24 IUCDs were removed due to side effects (cramping, bleeding, and spotting) and 17 IUCD's were removed on request mainly due to social reasons.

Discussion

IUD promotes release of leukocytes and prostaglandins from endometrium. This release interferes with sperm motility and impedes egg development. A change in amount and duration of menstrual flow and increase in the amount of menstrual cramping – this is the most common reason for removal (Penney G. et al; 2004). Changes in bleeding patterns, such as spotting/light bleeding (between periods), in the first few weeks; and discomfort or cramping during IUD insertion (Grimes DA. 2004) and for the next several days.

No steroidal anti-inflammatory drugs (NSAIDs) can lessen symptoms of pain (WHO 2004), and good counseling can encourage continued use of the method. (Backman T. et al; 2002, Zetina-Lozano G. 1983)

Additional research is needed to focus on the health outcomes of women using PPIUCD's. The flexibility of women and their satisfaction level for this method, study determining complications of PPIUCD's is not described yet. The IUD should not be inserted between 48 hours and 4 weeks postpartum because of an overall increase in the risk of complications, especially infection and expulsion. IUDs inserted at 4 weeks postpartum and beyond are considered interval IUDs, rather than PPIUDs, because the same technique and services are required.

In spite of the high acceptance and consent in the antenatal period, patients refused insertions at the time of delivery. PPIUCD is an ideal method to target the women who visits the health facility with antenatal care and pregnancy, because pregnancy is the only reasons for their visit to hospital.

Conclusion

The acceptance of PPIUCD was high in the present study, and it is practically identical to different studies done all inclusive. Most of the patients had never heard of the PPIUCD insertion in labor room. But after proper counseling the acceptance rate of PPIUCD was significantly high. The PPIUCD was safe, having no reported complication of perforation with low rates of expulsion and pelvic infection.

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Authors Contribution:

1. (First Author): Led the study design, data collection, analysis, and manuscript drafting.
2. (Last Author): Provided oversight, reviewed study design, data interpretation, and manuscript revisions.
3. (Second Author): Conducted statistical analysis, interpreted results, and contributed to manuscript sections.
4. (Third Author): Offered clinical insights, reviewed clinical data, and provided feedback on the manuscript.

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