IMMEDIATE POSTPARTUM INTRAUTERINE CONTRACEPTIVE DEVICE: AN EXPERIENCE OF FOLLOW UP OUTCOMES AT A TERTIARY CARE HOSPITAL

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ABSTRACT

Background: Family planning helps couples to attain their desired number of children and desired birth spacing. Different contraceptive methods serve this purpose [1]. Immediate postpartum intrauterine contraceptive device (IPPIUCD) is an effective, long term and reversible contraception that can be offered to women in the delivery setting, both after normal delivery and c/section. It reduces postpartum undesired pregnancies and thus induced abortions[2]. It is associated with low complications rates. Our objective was to assess follow up outcomes (in terms of irregular vaginal bleeding, abdominal pain, vaginal discharge, infectionand perforation, discontinuation and expulsion of IPPIUCD.

Methods: In this prospective observational study patients in whom postpartum IUCD was inserted within 10 minutes of delivery of placenta after normal vaginal delivery or c/section were included.Record of clients with IPPIUCD insertions at gynae and obstetric unit of Lady Reading Hospital Peshawar is maintained. Pre designed proformas were used for collection of data. Analysis at 6 weeks post insertion follow up visit was done.

Results: Of total 1005 clients of IPPIUCD insertions follow up of 682(67.8%) was recorded. Complications rate was low. About 26.8%(183) were with irregular vaginal bleeding, spontaneous expulsions found in 2%(13) and no cases of perforations were noticed.

Conclusion: IPPIUCD is an acceptable and safe contraceptive option in both vaginal and cesarean deliveries, with fewer complications. Early follow up examinations are helpful in identifying spontaneous expulsions and dealing with common problems.

Key Words: Contraception, Immediate postpartum, follow up outcomes.

INTRODUCTION

Child spacing needs implementation in Pakistan especially in the first year of childbirth because it issixth populous country in the world. In 2016 its population was estimated as 195.39 million with a growth rate of 1.89%, highest fertility rates in the region except Afghanistan and rate of contraceptive use of about 35%,all hampering its socioeconomic development[3].

Most of the women are not clear about contraceptive use in postpartum period.Moreover, lack of education and access to health facilities, social pressure, cost and long distances from health facility, myths about side effects and poor supply of contraceptives are main factors for poor postpartum contraception in developing countries. This in turn leads to increased rates of induced abortion, maternal morbidity and mortality. A study observed postpartum unplanned pregnancies from nonuse of contraception to be 86% resulting in 88% of induced abortions[4].

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The prevalence for unintended pregnancy is 38-46% while that for modern methods of contraception 26% in Pakistan[5]. All these facts emphasize importance of provision of contraception in this sensitive period i.e. ideal time to motivate patients for engagement in contraception is intra and postpartum period i.e. after exhaustion of pregnancy and labor.

According to world health organization,"postpartum family planning (PPFP) program focuses on prevention of unwanted and closely spaced pregnancies in the first 12 months following childbirth[6]. Our government is improving access to family planning programs in order to achieve Millennium Development Goals.The family planning program was first started in Pakistan in 1950s while PPFP in 2012. Family planning units are still working separate from obstetrics units making approach to antenatal patients difficult.

In Pakistan facility based births are 52%, rendering IPPIUCD an effective and excellent choice in reducing population burden of low resource countries like ours. It is coitus independent, easy to insert and does not affect breastfeeding. Both care provider and client are available in the same setting, securing time and cost of interval IUD insertion.

There are 160 million IUD users worldwide i.e. 14.3% of contraception users, so most widely used amongst modern methods of contraception[7]. Evidence

regarding safety and feasibility of PPIUCD insertion is provided by Cochrane reviews as well[8].

PPIUCD is associated with poor outcomes such as irregular vaginal bleeding, infection, expulsion and uterine perforation. These risks can be minimized by using standard technique and improved insertors. This is supported byan extensive literature review of Canadian Contraceptive Consensus[9].

The menstrual bleeding pattern changes encountered after immediate PPIUCD are distressing for patient. Reassurance of patients with mild symptoms is sufficient i.e. mild changes are due to postpartum involuting uterus. Mild cramping pain can occur in the first weeks of insertion. IUCD removal is an option for heavy and prolonged bleeding and constant abdominal pain. The upper genital tract infection risk is highest within first 15 to 20 days of insertion due to pre-existing infection and improper infection prevention practices (10).Absent strings at 6 weeks postpartum must be investigated via ultrasonography to ensure placement of IUCD.

Complications and side effects of PPIUCD will be less distressing if proper counselling services are used. These can be prevented by focusing on proper training, follow up after training, infection prevention practices and training monitoring. Improving follow up and regular monitoring system is keyhole for success of family planning program. This study is intended to explore follow up outcomes of IPPIUCD.

MATERIAL AND METHODS

This Prospective observational study was conducted at gynecology and obstetrics department of MTI Lady reading Hospital Peshawar from October 2018 to June 2019, after getting approval from hospital ethical committee. All patients fulfilling the inclusion criteria were included in the study via consecutive sampling i.e. clients in whom IUCD was inserted immediately after delivery of placenta regardless of mode of delivery. The person who inserted the device did post insertion counselling. Patients were given dates of their follow up on discharge card.Pre structured proformas were utilized and complications like irregular vaginal bleeding, perforation were noted there. For all the clients who got discharged uneventfully, follow ups were scheduled at 6 weeks. Most of the patients lost to follow up. Telephonic contact was made with clients who did not return to health facility for follow up visit.

At 6th week visit information regarding abdominal pain, menstrual abnormalities, abnormal vaginal discharge and spontaneous expulsion was gathered and recorded on a proforma. Pelvic examination was performed for signs of infection (foul smelling yellowish discharge), strings (which were trimmed if long) and presence of IUCD. If no threads were visible, ultrasonography was done to check for presence of IUCD and confirmation of its location. Those who did not come for follow up or did not answer telephonic inquiry were excluded from study.

In case of complications the women were given treatment and reassurance. The primary follow up outcomes were inquiry about menstrual irregularities, abdominal pain, vaginal discharge, expulsion, perforation and lost strings. Data was analyzed on SPSS version 20 and results were presented as percentages.

RESULTS

About six thousand deliveries occurred in our unit over the study period, of which 15.9% women opted for PPIUCD insertion thus about 156 (15.5%) intracesarean and 849 (84.4%) after vaginal delivery were inserted. Most of women (61.8%) belonged to age group of 25-35 years, with 421(61.7%) multipara (para 4 or more). Of 682 patients 287 (42%) women came physically for follow up i.e. up to 6 weeks after delivery while telephonic contact was made with 395 (58%) cases as shown in Table 1.

Table 2 indicates that 593 (86.9%) of users were satisfied with and had firm decision to continue IUCD in future as contraceptive. 72.2% did not develop any side effect with its use.

Table 3 shows that most common complaint recorded was abdominal pain in 191(28%)followed by irregular vaginal bleeding 183(26.8%), vaginal discharge 152 (22.3 %), excessive expulsion (confirmed by history or internal examination) in 20 (2.92%) and uterine infection in 1(0.14%). Patients with irregular bleeding werereassured that it will settle in 2-3 months and mafenemic acid and tranexamic acid was advised.

Table 4 shows that 20 (2.92%) IUCDs were expelled out of which 7 IUCDs had partial expulsion, with a loop in cervical os and were counted in expulsion. Most of expulsions occurred within first six weeks of insertion 13(2%). Of total IUCDs expelled 18 (2.6%) were inserted after vaginal deliveries compared to 2 (0.2%) after c/

Table 1: Demographic variables of patients

Variables	Groups	Number	%age
Age (Yrs.)			
	18 – 24	122	17.8
	25 -35	421	61.8
	>35	138	20.9
Parity			
	P1 – P2	76	11.1
	P3 – P4	470	69
	>P5	136	20
Follow up			
	Physical	287	42
	Verbal	395	58

Table 2: Satisfaction and continuation rate of IPPI-UCD

Groups	Number	%age
Patients having no side effects	493	72.2
Patients continued using PPIUCD	593	86.9

Table 3: Safety of IPPIUCD (Adverse follow up outcomes)

Adverse event	Frequency	%age
Abdominal pain	191	28
Irregular vaginal bleeding	183	26.8
Excessive vaginal discharge	152	22.3
Uterine infection	1	0.14

Table 4: Efficacy of IPPIUCD(Follow up outcomes)

Outcomes	Frequency	%age
Expulsion	20	2.92
Removal of IUCD		
Reasons	76	11.1
Irregular bleeding	33	4.8
Abdominal pain	29	4.25
Partial Expulsion	7	1.02
Excessive vaginal discharge	6	0.87
Uterine infection	1	0.14
Pregnancy	0	0
Perforation	0	0

section. 76 patients (11.1%) had deliberate removal of IUCD, the reason being irregular bleeding(no response to medical treatment) in 33(4.8%), abdominal pain in 29(4.25%), partial expulsion in 7(1.02%), abnormal vaginal discharge in (0.87%) and uterine infection 1(0.14%). Patients with bleeding problems opted for removal more than abdominal pain so bleeding was less well tolerated than other problems.

Ultrasound was done for all women with undescended strings to confirm intrauterine position. No unplanned pregnancy or uterine perforation was recorded (Table 4).

DISCUSSION

The aim of this tertiary care study is revival of IPPIUCD. It is a conscious effort to make use of benefits of this ideal and long term reversible opportunity in delivery settings of institutes of developing countries like Pakistan. The fear of perforation and sepsis associated with its use can be dealt with by making use of strategy of repeated significant experiences with its insertion as reported by a study at Thailand[11].

Most (61.8%) clients were multipara in our study because they suffer ill health more due to morbidity associated with repeated pregnancies, consistent with a Taiwan study with 57% clients having four or more children[12]. Scheduled personal follow up was observed in 682 (67.8%) patients of which 42% came physically while 58% contacted telephonically.This was in contrast with study by Reeto H which showed personal visit by 65.2% while telephonic contact in 22%[13]. The reason was that a large number of women from neighboring districts came to our tertiary center for delivery but due to long distances, they visited local health facilities for follow up and responded to telephonic contact.Verbal follow up was limitation of our study as well as a main dilemma of studies from developing world. It is reported to be 90% in a study from Karachi while 40-70% in other studies[14].

Women with problems came for follow up necessarily as compared to those with no complaints. The results of our study showed that majority 72.2% of users did not have any side effects, comparable with the results of Tayyiba and Anshuli with 66.6% and 66.68% patients respectively having no complaints[15,16].

Another limitation of study wasfollow up at short interval of 6 weeks making comparison with other similar studies difficult but still our study is fruitful as PPIUCD complications occur mostly within initial 6 weeks of insertion. Common discomforts with its use were irregular vaginal bleeding, lower abdominal pain and irregular vaginal discharge. Menorrhagia has been reported to be 4.3% and 27.2% in studies by Gupta A and Shukla et al respectively as compared to 26.8 % in our study[17,19]. In our study 4.8%, cases removed IUCD due to bleeding problems, which is comparable to removal rate of 6 - 8% by Celen and in contrast to 10% by Sucak and 16.8%by Tayyiba W[18-20].

Lower abdominal pain was found in 28% cases compared to 36.08% reported by Anshuli[16]. Increased vaginal discharge after IUCD insertion found was in 22.3 %patients and considered as sign of infection though was just normal leucorrhoea. A WHO report noted acute pelvic inflammatory disease in less than 1% women[21] while a study by A Gupta found no increase in infection rate after PPIUCD insertion[17]. In our institute special training workshop was organized for trainees and clinicians to ensure asepsis and handling of instruments during insertion.

Spontaneous expulsions were less in our study i.e. in 13(2%) comparable to 2.3% in a study by Projestine S[22] while Reetu,Celen et al and sucak reported expulsion rate of 17.6%, 5.3% and 9.3% respectively[13,18,20].

Timing of insertion is an important determinant of IUCD expulsion as expulsion rate for IPPIUCD at 6 months has been reported 9% as compared to 37% for insertion at 24-48 hours after delivery in UN-POPIN report[23]. Use of standard guidelines i.e. insertion of IUCD high in fundus of uterus by using Kelly forceps and selection of eligible candidates are considered main contributory factors for reducing spontaneous expulsion and other complications.

There was no uterine perforation, misplaced IUCD or any life threatening event in our study. Literature search have not reported any perforation so far. But we have removed two misplaced IUCD's in our unit laparoscopically which were inserted by some local Dais at rural areas , so mastering the skill of postpartum family planning should be part of curriculum of LHVs, LHWs and midwives serving in rural areas.

72.2% patients developed no side effects. The continuation rate of IUCD was significantly affected by its side effects as 11.1%% removed it due to side effects. In our study 86.9% clients continued using IUCD due to high level of satisfaction and this is comparable with continuation rates observed in Karachi 84%[14], Lahore 84.3%[15] and India 81-96%[19]. Women get assured and encouraged for continuation with IUCD after proper counseling and ultrasound confirmation of device at follow up visit.

CONCLUSION

Postpartum IUCD is an acceptable, easily available and effective strategy for contraception in both cesarean and vaginal deliveries with few complications and high satisfaction rate of > 75%. Benefits of its continuation outweigh the risks of adverse events. Effective counseling, Timing of insertion, trained service providers and fundal placement using long Kelly forceps are fundamental in reducing expulsions and other complications. Counselling for postpartum family planning should be included in routine antenatal care.

SUGGESTIONS

Further studies involving longer follow ups for one or two years should be conducted. Our sample is convenient, one representing largegroup of women from KPK because catchment area of our hospital is large but still does not represent the whole country. Postpartum IUCD is part of many postpartum family planning programs, but its acceptance and complications need further evaluation.

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