Original Article

Trans-Caesarean Insertion of Intrauterine Contraceptive Device

Farhat Arshad[1], Lubna Ejaz[2], Humera Noreen[3], Naheed Bano[3], Shazia Syed[3], Rizwana Chaudhri[4]

[1]Consultant Gynaecologist, Gyn Unit-I, Holy family Hospital, Rawalpindi [2]Associate Professor, [3]Assistant Professor, [4]Professor, Rawalpindi Medical College, Rawalpindi.

Correspondence: *Dr Farhat Arshad*
[1]Consultant Gynaecologist, Holy family Hospital, Rawalpindi
Email: farhat_68@hotmail.com

Abstract

Objective: *To evaluate patient's acceptance, satisfaction & complications regarding trans-caesarean Intra Uterine Contraceptive Device or post placental intrauterine contraceptive device(PPIUCD)*

Study Design: Descriptive case series.

Place and Duration: Gyn/Obs Unit – I Holy Family Hospital Rawalpindi from 01-06-2012 to 31-05-2013.

Methodology: Pregnant women who were P1 or more & required caesarean (CS) section(elective or emergency) were counseled during antenatal visits & labour and consent taken. Trans-caesarean IUCDs were inserted in 240 cases. During follow up visit at 6 wks, 3 and 6 months enquiry was made about IUCD Expulsion, excessive bleeding, pain abdomen, backache, vaginal discharge and satisfaction rate, which were recorded on predesigned performa. Data fed to SPSS 16. Frequencies and percentages and Mean ± SD were computed to present all variables.

Results: Out of 240 trans- caesarean IUCD insertions and follow up at 6 wk, 3 and 6 months. Cases lost to follow up were 64 (26.66%), 74(30.83%), 80 (33.33%) at 1st, 2nd & 3rd visit, respectively. Out of 176 women at 1st follow up visit, 120/176(68.18%) came in person, 56 (31.81%) were followed on telephone. Total follow up cases on 2nd & 3rd visit were 166 &160 women, among whom 108 (86.2%) Vs. 16 (13.7%) came in person and 99(88.3%) Vs 13(11.60%) were followed up on telephone. No problem was found in 94 (50.56%), but there were minor problems in 67(38.06%). In 5 (2.8%) IUCD was expelled, while in 6 (3.4%) IUCD had to be removed on request at the end of follow up. A total of 156(88.6%) IUCDs in situ were confirmed clinically and 09(5.11%) by ultrasound. Expulsion rate was 2.8%. Satisfaction rate was 89.9% at the end of 6 months. No case of misplaced IUCD, PID or uterine perforation was reported.

Authorship Contribution: *[1]conceptualized, designed and authored the study, [2] Conceived the idea [3]Data Analysis and reviewed the study,[4] Reviewed the Study*
Conflict of interest: *None*

Conclusion: Trans-caesarean IUCD is an effective method of contraception in developing countries like Pakistan.

Key Words: Post-placental IUCD (PPIUCD), Trans-caesarean IUCD, Effectiveness, Complications.

Introduction

In view of high rate of unintended pregnancy in our country, there is a need for reliable, effective, long-term contraception such as IUCD, especially in immediate post partum period. Acceptance and actual insertion of IUCD is low, as IUCD insertion in post partum period is a new concept. For many women, the only opportunity to receive information about contraception is during child birth, when they are in contact with medical personnel and usually highly motivated to use contraception.

According to WHO, unmet need for contraception in Pakistan is 25%, which is highest in the South-East Asian Region.[1] The practice of contraception is low due to lack of awareness, non-availability of accessible family planning services, restricted mobility of women due to cultural or geographical factors. A unique opportunity to address their need for contraception is at the time of delivery in a health care centre. The popularity of the IUCD insertion in the immediate postpartum period in countries like China, Egypt, and Mexico encouraged this approach in our country.[2]

Insertion of an IUCD immediately after caesarean section (CS) or vaginal delivery is appealing for several reasons. We are sure that woman is not pregnant, she is highly motivated to accept any advice of contraception and it is easy to insert IUCD with minimal instrumentation & staff, which is convenient for both the woman and health facilites[3] and chances of return to health facility for contraceptive advice are very little.[4]

Similarly although there is great variation in the return of fertility and sexual activity following child birth, but the earliest known time of ovulation is 27 days after delivery.[5] Therefore, no contraception is needed until 21 days postpartum. All women should be advised the use of contraception after 21 days if they do not wish to become pregnant again.[5]

The puerperium and lactation make particular demand on the safe choice of contraception as there is an increased risk of venous thromboembolic disease in the first 03weeks following childbirth and breast-feeding is a relative contra-indication for the use of combined oral contraceptive pill (COCP). Post partum IUCD is a long acting reversible method that does not interfere with breast feeding,[6] which can be provided before the woman leaves the health facility & requires no transition from one method to another. It is locally effective and free from systemic side effects. Once placed, it is effective for 5 years. Counseling of patient, timing of insertion, and training are important factors for IUCD insertion in postpartum period.[7] Post-partum insertion can be done within 10 min of placental delivery (post placental application), trans caesarean, and vaginal delayed insertion till 48 hrs of delivery or interval insertion any time after 4 weeks of delivery.[8]

Rationale of the study: To create awareness among reproductive age women about the effective, useful and easily adoptable method of trans caesarean insertion of IUCD.

Methodology

This is a descriptive case series, being conducted in

Gynae / Obs unit I Holy Family Hospital Rawalpindi. Results are shown for one year period from 01-06-2012 to 31-05-2013. Study was started after approval from ethical committee of hospital. All eligible women were counseled for trans-caesarean IUCD during antenatal visits, antenatal admission and during labour. We especially counseled multiparous women who were not willing for Bilateral Tubal Ligation (BTL), previous scars with short inter pregnancy interval and women with multiple CSs. Previous method used by them for contraception and as to why it was discontinued, the causes of both acceptance and refusal were also recorded on a specially designed performa.

Inclusion criteria: All women who were Para1 or more and grand multi not willing for BTL

Exclusion criteria: *M*edical un-eligibility criteria for IUCD by WHO criteria women having anaemia (haemogloblin <10 g/dl), post-partum haemorrhage (PPH), pre-mature rupture of membranes (PROM) >18 hrs or those with obstructed labour, were excluded. Primigravida and women with distorted uterine cavity were also excluded.

Written informed consent was taken. During CS, after delivery of baby & placenta, CuT / MULTILOAD inserted through the incision in the uterus with the help of its applicator, string of IUCD was directed towards cervical canal. Uterine incision was closed taking precaution not to stitch the string within the stitch line. Women were informed about the IUCD insertion in the post-partum period. Follow up done at 6 weeks, 3 and 6 months. Women were asked about expulsion of IUCD, excessive bleeding, backache, abdominal pain or vaginal discharge on each visit & findings were noted on a preformed proforma.

On follow up visit abdominal & speculum examinations were done and the findings were recorded. If IUCD string was found to be long and coming up to the introitus, it was cut short to 2 cm from external cervical os. If string of IUCD was not visible and there was no history of expulsion of IUCD, presence of IUCD was confirmed by pelvic ultrasound, & woman on her next follow up was reassessed for the visibility of string.

Data Analysis: Data analysis was performed through SPSS version-16. Frequencies and percentages and Mean ± SD were computed to present all variables including age, parity, mode of delivery, minor problems, expulsion & continuation rate and satisfaction rate.

Results

During one year of this study from June 2012 – May 2013 total no. of deliveries in gyn/obs unit I were 7828. Vaginal deliveries were 5113 (65.31%) and LSCS were 2715 (34.68%). EL-LSCS 624 (22.98%) & EM-LSCS 2091 (77.01%).

Four sixty five (465) women fulfilling inclusion criteria were counseled for trans- caesarean IUCD, 240 agreed. Common reasons for refusal were, planning another pregnancy in near future, preference for another contraceptive method, and some complication from previously used IUCD.

Among 240 women 110 (45.83%) were not using any method before present pregnancy while 130 were trying family planning (SD 0.499). Barrier methods were used by 47(19.58%), while 66 (27.5%) were trying natural methods .Other methods(OCP/ Injectable /IUCD users were 17(13.07%). All of them underwent immediate trans-caesarean IUCD insertion.

Women were between 20 – 40 yrs of age, maximum IUCDs were placed in age group of 26 – 30 yrs and were P 1 with previous 1 LSCS. All were followed up after 6 wk, 3 and 6 months. However, 64(26.66%) women did not come for 1st follow up. Follow ups are shown in Table I.

Table I. Follow Up Visit

Follow Up Total n=240	Came for Follow up	Lost to Follow Up
06 Weeks	n=176	64
03 Months	n=166	74
06 Months	n=160	80

Satisfaction rate was 89.8% (SD 0.303) (Figure 1)

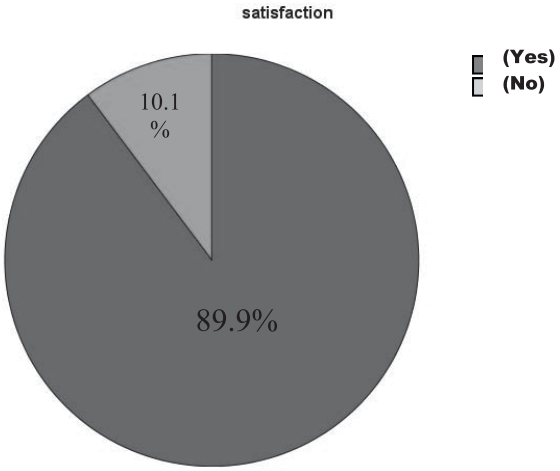

Figure 1. Satisfaction rate

Minor problems encountered by women are shown in Table II. IUCD was confirmed clinically in 156 (88.6%) women on first visit. However, IUD string was not seen in 9 (5.1 %) women. In situ IUCD confirmed by ultrasound in these women. String was visible in 3 on their 2nd follow up visit while others were reassured. The cumulative expulsion rate at the end of 6 months was 2.8%. Three woman request IUCD removal on 1st and 01 on 2nd follow up visit while 02 requested for removal after 8-9 month of insertion. There was no case of misplaced IUCD, PID or uterine perforation was recorded after 6 month.

Table II. Complications observed on follow up

Complications	1st Follow up	2nd Follow up	3rd Follow up
Back ache / Pain abdomen	25 (14.20%)	22 (13.25%)	24 (15.%)
P/V Discharge	22 (12.5%)	20 (12%)	21 (13.12%)
Excessive / Irregular bleeding	30 (11.6%)	17 (10.24%)	0
IUCD Expulsion	2 (1.13%)	2 (1.2%)	1 (0.62%)
IUCD Removal	3 (1.7%)	1 (0.6%)	2 (1.25%)
No problem	94 (50.56%)	104 (62.65%)	112 (70%)
Total	176	166	160

Discussion

Trans Caesarean IUCD insertion is a unique, relatively new method of family planning. It is convenient both for woman & health care providers. It is especially good for women who think they do not want more children, but want to delay sterilization until they are certain.[7] Making things easy and convenient for women makes a big difference in ultimate acceptance.[9]

A study by Sahaja Kittur, shows expulsion rate of 5.23% and it was concluded that the expulsion rates after PPIUCD would be minimal if it was inserted by a trained provider and placed at the fundus.[10]

A recent systematic review suggests the risk of complications of IUCD insertion in the placental period compared later insertion of it is not high. However, risk of expulsion is greater with delayed compared with immediate (<10 minutes following

delivery of the placenta) insertion and with immediate compared with interval insertion.[11] Another study concludes that immediate post placental insertion is an effective, useful, safe, convenient and low-cost procedure for early postpartum contraception although cumulative 1 year expulsion rates is high i.e. 12.3%.[12]

The present study was planned to evaluate the safety and efficacy of trans-caesarean IUCD insertion in women delivering by caesarean section in a tertiary care center facility. In our study, there was no case of infection due to post-partum IUCD insertion, comparable with another trial.[12]

Expulsion rate of our study (2.8%) correlates well with results of a systematic review[13] that post placental placements during caesarean delivery are associated with lower expulsion rates than post placental vaginal insertions, whereas the expulsion rate is highest in delayed insertion, without increasing rates of postoperative complications. However, in a five year experience at a tertiary care centre in north India with insertion of IUCD immediately after delivery of placenta in vaginal or caesaran delivery, the cumulative expulsion rate at the end of 6 months was 10.68 percent.[14]

No cases of perforation, misplaced IUCD or any other major complications were found in present study, which is comparable with other studies.

Welkovic et al studied post-partum bleeding and infection after post-placental IUCD insertion, and found no difference in the incidence of excessive bleeding.[15] However literature does mention menorrhagia due to IUCD [10] and in present study 30(11.6%) cases experienced menorrhagia which was settled with mefenamic acid.

In a systematic review continuation rates of PPIUCD varied between 57.3% and 93.3% per 100 women (87.6% -76.3% at 6 & 12 month respectively). [12] This corresponds with satisfaction rate of our study i.e. 89.8%.

At present the limitation of our study is the small sample size with a follow up of 6 months. The loss to follow up rate (26.6%) is also high. However, as this is an ongoing study, we will try to follow these women for at least one year to overcome present weaknesses of the study. As a prolonged follow up of at least one year is required to comment upon the success or failure rate of this technique.

Conclusion

Trans- caesarean insertion of IUCD is a unique & highly effective method of family planning to address the unmet need of family planning in developing countries like Pakistan where women have limited access to medical care & they do not come for post natal counseling and contraception. It is convenient both for women & health providers.

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