
Immediate Postpartum Insertion of Intrauterine Device: An Ideal Method

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Abstract

Objective: this study was conducted to evaluate the safety, efficiency and feasibility of IUD insertion immediately after expulsion of placenta, in women delivering vaginally or by caesarean section.

Study Design: descriptive Case Study

Place and Duration of the Study: Sindh Government Qatar Hospital, Karachi from March 2011 to February 2012.

Methodology: this prospective study was carried out at Sindh Government Qatar Hospital from March 2011 to February 2012. The women included in this study had multiload insertion immediately after delivery of placenta in vaginal or caesarean delivery. Women with pre-labour rupture of membranes > 18 hours, chorioamnionitis, continuous PPH, anaemia, obstructed labour and distorted uterine cavity due to fibroid or congenital anomaly were excluded. Included women were followed up at 1 week, 6 weeks and 6 months after delivery.

Results: a total of 150 women were included in this study. Out of them 64% had vaginal delivery and 36% patients delivered by Lower Segment Caesarean Section (LSCS). There was no case of uterine perforation. The cumulative expulsion rate at the end of 6 months was 8%.

Conclusion: immediate postpartum insertion of IUCD appeared safe and effective. Advantages include high motivation, assurance that women are not pregnant and convenience.

Early follow up is important in identifying spontaneous IUCD expulsion.

Key Words: immediate post placental, IUCD (multiload), Contraception.

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Introduction

Poorly spaced pregnancies have been documented worldwide to result in adverse maternal and child health outcomes. Pakistan is a country with a high fertility rate of 3.8 per woman and low contraceptive prevalence rate of 35 %.¹ The unmet need of contraception is about 65 %. The reasons for low use of contraception are; lack of awareness, non-availability of accessible family planning services and limitations of women mobility due to cultural and socio economic factors. The time of delivery provides the best opportunity to address their need for contraception, provided the delivery takes place in a health care facility. Routinely, women are discharged after delivery and called after 6 weeks for contraception advice.

A number of women fail to return to avail contraceptive services once they leave the hospital and become pregnant unintentionally.² We need to promote the strategies of birth spacing when women present themselves to health care facility. Insertion of IUD immediately after delivery has been recommended by the WHO as one of the safe and effective methods of reversible contraception worldwide.³

In immediate postpartum period women are highly motivated for contraception and setting is convenient for both patient and provider. This approach is especially suitable in our country where deliveries maybe the only time when healthy women come in contact with health care personnel. The experience of IUD insertion in

immediate post placental period is limited in our country yet.

This study was planned to determine the safety and efficiency of immediate post placental insertion of IUCD in women delivering vaginally or by caesarean section.

Operational Definition: intrauterine contraceptive device inserted just after the delivery (within 10 minutes of expulsion of placenta and membranes) stays in place (uterus) for at least 6 weeks in about 90% of patients.

Methodology

This prospective study was conducted in Obs/Gynae Department of Sindh Government Qatar Hospital, Karachi from March 2011 to February 2012. **Permission was taken from hospital Administration letter no SGQH/1705.** One hundred and fifty women were included after taking their **written informed consent.** The sample size was calculated by OpenEpi calculator. The prevalence of IUCD method among women who used contraceptives was taken as 16%. With 5% margin of error, 80% power and 90% confidence level, the total sample size came out to be 146. We sampled 150 women by using purposive sampling technique. Sample size is limited to ensure complete follow up in all patients as we included only those patients who came through some midwives. (These mid wives passed out from our hospital midwifery school and provide services in the local community). They remain in contact with the patients. By adopting this strategy we followed all the patients till 6 months. Women

and their husbands were counseled during antenatal and intrapartum period.

Inclusion Criteria: women who delivered vaginally or by caesarian section and had no exclusion factors were included in the study.

Exclusion Criteria: according to medical eligibility criteria for IUCD by WHO, women having anaemia (Hb% < 10.0gm), PPH, pre labour rupture of membrane > 18 hours or with obstructed labour were excluded. Women having distorted uterine cavity by fibroid or congenital malformation, irregular heavy vaginal bleeding, genital tuberculosis, fever during labour and twin delivery were also excluded.

Copper containing IUCD (multiload) was inserted within 10 minutes of delivery of placenta and thread was cut. The IUCD held by sponge holder was introduced in the uterine cavity and placed at fundus of uterus in women delivering vaginally. In case of caesarian section IUCD was placed inside the fundus through lower segment incision, thread was passed to vagina and assistant felt the thread. After finishing the surgery, vaginal examination was done and thread was cut. Women were given antibiotics and mefenamic acid for 5 days. Follow up was done at 1 week, 6 weeks and 6 months of delivery. All women were counseled to report missing threads, heavy vaginal bleeding, pussy or smelly discharge with pain in abdomen on each visit. Abdominal, speculum and vaginal examinations were done and findings were recorded. If the thread was not seen and there was no history of expulsion of IUCD, pelvic ultrasonography or X-ray pelvis was

done to locate the misplaced IUCD. Safety was assessed in terms of perforation, infection and heavy vaginal bleeding. Efficiency was determined by expulsion rate and IUCD removal.

Results

Total 150 patients were selected. All of them had immediate post placental insertion of IUCD (within 10 minutes of delivery of placenta. The women were between 20-35 years of age. Out of them n=22 (14.6 %) were primiparous and n=128 (85.3%) were multiparous. All of them were housewives and belonged to poor socio-economical class. Only n=45 (30%) had done their matriculation, remaining n=105 (70%) were under-matric. Out of 150 women n=96 (64%) had vaginal deliveries while n=54 (36%) delivered by LSCS.

Regarding the safety issue, no case of perforation or infection was detected. Thirty four (22.6%) women complained of lower abdominal pain at 1 week of insertion. They were counseled that it may be due to involution of the uterus or due to surgery. Most of them got relieved with mefenamic acid and only 10 (6.6%) had this complaint at 6 months, but it was not significant. Forty four (29.3%) women complained of heavy bleeding P/v at 5 weeks follow up. They were counseled and given tranexamic acid and mefenamic acid to minimize the bleeding. By the end of 6 months, there were only 15 (10%) women with complain of heavy vaginal bleeding. Out of them 14 (9.3%) did not agree to continue using IUCD, thus it was removed. Expulsion occurred in 9 (6%) women at 1 week and 12 (8%) at 6 weeks of insertion. The

cumulative expulsion rate of IUCD at 6 months was 8%. Expulsion rate of IUCD differed significantly by insertion route. At 6 months it was 10 (6.6%) and 2 (1.3%) for vaginal delivery and caesarian section respectively. There was no case of unplanned pregnancy with IUCD inside the uterine cavity. Continuation rate was 141 (94%), 138 (92%) and 124 (82.6%) at 1 week, 6 weeks and 6 months respectively. Table I and II show various parameters.

Table I. Clinical Outcome of Immediate Postpartum IUCD Insertion. (n=150)

Complication	1 week	6 week	6 months
Infection	-	-	-
Perforation	-	-	-
Heavy bleeding P/v	-	n= 44 (29.3%)	n=15 (10%)
Abdominal Pain	n= 34 (22.4%)	n=15 (10%)	n=10 (6.6%)

Table II. Outcome in SVD and LSCS.

Efficacy	1 week	6 week	6 months
Expulsion	n=9 (6%)	12 (8%)	12 (8%)
SVD	7 (4.6%)	10 (6.6%)	10 (6.6%)
LSCS	2 (1.3%)	2 (1.3%)	2 (1.3%)
Removal	-	-	14 (9.3%)
Continuation	141 (94%)	138 (92%)	124 (82.6%)
Unplanned pregnancy	-	-	-

Discussion

During the post-partum period women and their husbands are highly motivated and need an effective method of contraception intrauterine device insertion during this time period. Immediate post placental insertion of an IUCD may avoid the discomfort related to interval insertion and any bleeding may be disguised by lochia.² Use of

IUCD is simpler, less expensive and immediately reversible. Copper containing IUCD does not interfere with breast feeding. Intrauterine contraceptive device is the second most common method of contraception used by women in regions with large population.^{4, 5} including Pakistan. It is favoured by women who wish to use a contraceptive method that does not require regular motivation for use, husband participation and are not keen on using hormonal methods.⁶

Ideally post partum insertion should take place within 10 minutes of placental delivery or later till 48 hours of delivery.^{7, 8, 9} In our study all (n=150) women had IUCD insertion within 10 minutes of delivery of placenta. The cumulative expulsion rate at the end of 6 months was 8%. This is comparable with a local study in which expulsion rate was 6%.¹⁰ This is also supported by studies conducted in India in which expulsion rate of 10.68% and 6.1% at the end of 6 months is reported.^{11, 12} Another study by Kalen et al had 11.3% cumulative expulsion rate.¹³ Review of four multisite studies in UN-POPIN report found 9% expulsion rate at 6 months after immediate post partum insertion of IUCD and 37% expulsion with insertion between 24 to 48 hours of delivery.¹⁴

In our study expulsion rate after caesarian section is significantly less than after vaginal delivery 10(6.6%) vs. 2(1.8%). This is supported by local study at JPMC.¹⁵ There is evidence to suggest that intraoperative insertion may actually have lower expulsion rate.¹⁶ In the present study there is no case of uterine perforation and infection. Insertion complications of perforation and infection

are not increased by IUCD placement at any time during the post-partum period.^{17, 18, 19}

In the present study 29.3% of women had heavy bleeding. In 14 women IUCD was removed due to non responding bleeding to medical treatment. Almost the same results are reported in another local study with removal in 6.6% due to heavy bleeding P/v.¹⁰ From Indian Shukla et al reported 27.2% cases of menorrhagia. IUCD had to be removed in 65 women.¹¹

Expulsion rates of IUCD remained the same at 6 weeks and 6 months, but there was an increase in discontinuation and removal of device at 6 months due to heavy bleeding. We followed up all the patients included in our study till 6 months of insertion. It became possible because we selected only those patients who came to us through midwives. Those midwives remain in contact with them. Otherwise it was not possible as our patients have very poor compliance for follow ups. However the small sample size is a limitation of our study.

Conclusion

Immediate postpartum insertion of IUCD is an effective, safe and easily reversible method of contraception. Women who may have difficulty accessing medical care would benefit from receiving a highly effective method of contraception immediately after delivery. Early follow-up is important in identifying spontaneous IUCD expulsion.

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Petty Minds Talk of themselves

Small Minds Talk of other Persons

Average Minds Talk of Events

Great Minds Talk of Ideas

But the Greatest

Act in Silence