Vol. 2, No. 2, Jul-Dec 2018

ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL

Alamat Korespondensi:
Ruang Redaksi Andalas Obstetrics and Gynecology Journal, Lantai 3 PPDS Obstetri dan Ginekologi Universitas Andalas, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127

Website:
http://jurnalobgin.fk.unand.ac.id/index.php/JOE

eISSN : 2579-8324 pISSN : 2579-8323

RESEARCH

Effect of Suturing Intrauterine Device for Continuity in Post-Partum Contraception Family Planning Trancaesarean Method

Ariadi[1], Hafni Bachtiar[2]

Affiliations *: 1. Obstetrics and Gynecology Department, Faculty of Medicine, Andalas University, Dr. M. Djamil Central General Hospital Padang; 2. Public Health Department, Faculty of Medicine, Andalas University Padang*

Correspondence: *Ariadi, email : belantiraya@yahoo.com, Hp : 0811662934*

Abstract

The insertion of an intrauterine device (IUD) is installed immediately after delivery has been recommended by the WHO, as one method of contraception is safe and effective for interim and prevent missed opportunity (unmet need). IUD insertion after childbirth can avoid the discomfort that usually occurs during the interval insertion, and lochia can obscure any bleeding from the insertion. However, post-partum IUD insertion has disadvantages as well. The risk of the possibility of spontaneous expulsion is very high. This study is an experimental study with the method of post-test control group design to determine differences in IUD expulsion rate tied and not tied when installed during caesarean section at RSUP. Dr.M.Djamil in Padang, and Military Hospital Reksodiwiryo Padang and Painan District Hospital. There were no significant differences between trancaesarean IUD insertion methods that are not tied or tied (P> 0.05). The percentage of expulsion is not tied 11.4% higher compared to 0% tied expulsion. Statistically, were not significant differences as obtained P value> 0.05.

Keywords: *IUD, tied, trancaesarean*

INTRODUCTION

Reproductive Health in the Population and Family Planning program is an activity to improve the quality of reproductive health, which includes improving the survival of mothers, babies, and children (KHIBA), prevention of sexually transmitted diseases (STDs), HIV and AIDS, prevention of reproductive cancer (KAR) and prevention of secondary infertility.[2]

The current condition regarding reproductive health is very worrying, such as the survival of mothers, babies, and children in Indonesia is still low. This can be seen from the high Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR). The 2007 Indonesian Health Demographic Survey data shows that the MMR is 228 / 100,000 live births, the IMR 34 / 1,000 live births, and it is estimated that the number of deliveries is around 4.5- 5 million / year. Meanwhile, according to the 2012 Indonesian Health Demographic Survey data, the MMR of 359 / 100,000 live births, IMR is 32 / 1,000 live births.[2.3]

WHO has recommended the insertion of an intrauterine device (IUD) that is inserted immediately after delivery as a safe and effective method of temporary contraception. In the

Received June 6th, 2018
Accepted June 28th, 2018
Correspondence: Ariadi, email : belantiraya@yahoo.com

Vol. 2, No. 2, Jul-Dec 2018
ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL
Alamat Korespondensi:
Ruang Redaksi Andalas Obstetrics and Gynecology Journal, Lantai 3 PPDS Obstetri dan Ginekologi Universitas Andalas, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127
eISSN : 2579-8324 pISSN : 2579-8323
Website:
http://jurnalobgin.fk.unand.ac.id/index.php/JOE

post-partum period, the mother is usually very motivated and needs an effective contraception method so that the child can grow up without worrying about further unwanted pregnancies.

The dilemma occurs if the mother is made to wait six weeks to start an effective contraceptive method, there may be an accidental pregnancy, or the patient may not come back for insertion. This approach applies more to our country, where childbirth may be the only time a healthy mother comes in contact with a health worker. Compared with sterilization, however, the use of intrauterine devices (IUD) is simpler, cheaper, does not interfere with breast milk production, and is reversible. Post-partum IUD insertion avoids the discomfort that usually occurs at interval insertion, and lochia may mask any bleeding from the insertion. However, this post-partum IUD insertion has disadvantages as well. The risk of spontaneous expulsion is very high.

Kittur et al. reported that in Egypt after post-partum family planning counseling who approved post placental contraceptives, 71.2% were acceptors. In contrast, only 7.2% of those who approved the insertion of interval method contraceptives returned for insertion. Almost the same thing happened in Columbia and Turkey. Meanwhile, contraceptive insertion during cesarean section was associated with lower expulsion than vaginal insertion, without any postoperative complications. Post-partum insertion of intrauterine devices is concluded to be effective and beneficial. [4]

In the early research phase, most post-partum insertions were performed in some countries from a few hours to seven days or more after delivery. Since the 1970s, immediate post placental insertion, insertion of IUDs performed within 10 minutes of delivery of the placenta, has been recommended, some reports report low expulsion rates but some report high expulsion rates.[5]

The expulsion rate for immediate post-partum IUD insertion is higher than interval insertion and may reach 24%. The expulsion rate for manual installation and the forceps ring is almost the same, but there are differences in the expulsion rate for experienced and non-experienced installers. Insertion immediately after birth during cesarean section is associated with a lower expulsion rate than vaginal delivery. The advantages of immediate insertion may be considered rather than the risk of expulsion. The disadvantage of waiting 4 - 6 weeks post-partum for interval insertion is that the patient does not return for IUD insertion. [6]

Expulsion variation based on insertion time: [7]

1. Postplacenta: 13% - 16%, but can be lower by 9% - 12.5% depending on the experience of the operator.
2. Transesarea: 4% - 13%
3. Insertion immediately after postpartum: 28% - 37%
4. Slow insertion after 48 hours - 4 weeks after delivery is not recommended.

Received June 6th, 2018
Accepted June 28th, 2018
Correspondence: Ariadi, email : belantiraya@yahoo.com

Vol. 2, No. 2, Jul-Dec 2018
ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL
Alamat Korespondensi:
Ruang Redaksi Andalas Obstetrics and Gynecology Journal, Lantai 3 PPDS Obstetri dan Ginekologi Universitas Andalas, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127
eISSN : 2579-8324 pISSN : 2579-8323
Website:
http://jurnalobgin.fk.unand.ac.id/index.php/JOE

Various attempts were made to reduce the IUD expulsion rate, especially when using post placenta and trancesarea. Through a randomized clinical trial, Thiery M et al. concluded that the Delta Loop IUD was not proven to have a high expulsion rate. The T-model IUD (Delta TCu 22OC and TCu22OC) has a low expulsion rate; a low expulsion rate also occurs in strapped and untied TCu22OC. Delta loop IUD, delta TCu 22OC and TCu22O are safe for post-partum insertion against infection and perforation.

Based on the description above, the researcher is interested in researching the effect of whether or not the intrauterine device is tied up during cesarean section on the expulsion rate in several West Sumatra hospitals, namely RSUP. Dr. M. Djamil Padang, RST Reksodiwiryo Padang, and RSUD Painan.

METHOD

This study is an experimental study with a post-test control group design method to determine the difference in the expulsion rate of strapped and untied IUDs inserted during cesarean section in RSUP Dr. M Djamil Padang, RST Reksodiwiryo Padang, and RSUD Painan.

In subjects who matched the inclusion and exclusion criteria, after the explanation and informed consent were carried out, the trancesarean method of IUD was inserted, one group was given a treatment tied with chromic catgut 2.0 to the endometrium while the other group was not tied. Then three months after insertion, an ultrasound examination was performed to see the intrauterine IUD.

FINDINGS

During the study period April - July 2014, 88 respondents used the trancesarean method of IUD, who met the inclusion and exclusion requirements of DR.M. Djamil, RS. Reksodiwiryo Army and RSUD M. Zein Painan. With 44 patients using the trancesarean strap IUD method and 44 patients using the trancesarean IUD without strapping. Patient characteristics are as follows:

Of the 88 samples that met the inclusion and exclusion criteria, the study sample's characteristics were obtained based on age, parity, and exposure, as shown in table 1.

Table 1. Research Samples' Characteristics

Variable	Group				p
	Tied		Untied		
	Mean	SD	Mean	SD	
Age	27,95	5,05	27,75	5,22	0,70
Parity	1,95	0,78	1,72	0,79	0,18
Opening	1,50	2,38	1,57	2,35	0,90

Received June 6th, 2018
Accepted June 28th, 2018
Correspondence: Ariadi, email : belantiraya@yahoo.com

Vol. 2, No. 2, Jul-Dec 2018
ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL
Alamat Korespondensi:
Ruang Redaksi Andalas Obstetrics and Gynecology Journal, Lantai 3 PPDS Obstetri dan Ginekologi Universitas Andalas, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127
eISSN : 2579-8324 pISSN : 2579-8323
Website:
http://jurnalobgin.fk.unand.ac.id/index.php/JOE

The mean age of mothers who were tied was slightly higher than those who were not tied (27.95 ± 5.05 years and 27.75 ± 5.22 years), after being tested it was not statistically significant because it was obtained p> 0.05, then in terms of age, the two groups can be considered equal.

The average parity that was tied was slightly higher than that which was not tied (1.95 ± 0.78 and 1.72 ± 0.79), after testing it was statistically insignificant because it was obtained p> 0.05, so in terms of the parity of the two groups can be considered equal.

The mean opening was slightly smaller than the untied ones (1.50 ± 2.36 and 1.57 ± 2.35). After testing it was statistically insignificant because it was obtained p> 0.05, so in terms of the parity of the two groups can be considered equal.

Table 2. Effect of tied and untied IUD treatments on the outcome of expulsion or non-expulsion.

Treatment	Outcome			P
	Expulsion (%)	Non-expulsion (%)	Total (%)	
Tied	44 (100%)	0 (0%)	44 (100%)	
Untied	39 (88,6%)	5 (11,4%)	44 (100%)	0,055
Total	83 (94,3%)	5 (5,7%)	88 (100%)	

The percentage of untied expulsion was 11.4% higher than that of 0% bound expulsion. Statistically, there was no significant difference because it obtained a P value> 0.05, which was tested by the Fisher's Exact Test. After all, there were two cells (50.0%) with a value of less than five.

DISCUSSION

In this study, 88 samples met the inclusion criteria and did not meet the exclusion criteria which came to RSUP Dr. M. Djamil, RS. Reksodiwiryo Army and M.Zein Painan Hospital. After giving an explanation and informed consent, the patient agreed to have an intrauterine device installed. The number of patients who used intrauterine contraceptives and were given tied treatment was 44 people, and the rest were not tied.

It is hoped that the thread binding on the IUD can hold the IUD during the uterus' involution, thereby reducing the expulsion rate. The use of chromic catgut 2.0 threads with the consideration that the chromic has a maximum strength of 10-14 days and will be fully absorbed when it is 120 days, which is considered the uterine involution process has been completed.

Sample characteristics such as maternal age, parity, and patient exposure at admission were assessed to assess sample equality. After a statistical assessment was carried out, it was found that p> 0.05 was every characteristic, meaning that the two sample groups were not significantly different in characteristics and could be considered equivalent.

Received June 6th, 2018
Accepted June 28th, 2018
Correspondence: Ariadi, email : belantiraya@yahoo.com

Vol. 2, No. 2, Jul-Dec 2018
ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL
Alamat Korespondensi:
Ruang Redaksi Andalas Obstetrics and Gynecology Journal, Lantai 3 PPDS Obstetri dan Ginekologi Universitas Andalas, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127
eISSN : 2579-8324 pISSN : 2579-8323
Website:
http://jurnalobgin.fk.unand.ac.id/index.php/JOE

This study found that the untied expulsion rate was 11.4% versus 0% for the untied. Then both groups of strapped and untied samples were statistically tested for their effect on expulsion or non-expulsion outcomes using Fisher's Exact Test and obtained p> 0.05, which means that the binding effect on IUD expulsion was not statistically different.

Previous studies reported varying expulsion rates in patients using the trancesarean method IUD without additional thread modification. I Cheng Chi in 1984 reported 4.1% expulsion, Ana Lúcia Letti Müller.dkk 2005, got 0%, L. Ryujin 2011 et al. reported 6%, Şevki Çelen et al. 2006 - 2007 reported 17.6% expulsion rate, Norman D Goldstuck reported a rate of 5% - 15% with additional information that the expulsion rate appeared to be higher, especially in the older IUD models. [9,10,11,12,13]

For the use of a modified IUD with the addition of strings, the results also varied. Treiman K, 1988 reported that the addition of thread to the IUD reduced expulsion but only slightly, whereas I Cheng Chi reported a 1.2% rate. Hernandez reports that the addition of yarn has little effect in reducing expulsion. The Cochrane Collaboration 2010 reports that adding absorbable yarn or adding other parts appears to be of little benefit and has little effect on preventing expulsion. [14,15,16,5]

From the results of this study, although from the master table, it seems that binding affects reducing expulsion, it turns out that there is no binding effect on the expulsion rate when tested statistically.

CONCLUSION

There was a difference in the number of expulsion for untied and untied IUDs (11.4% vs. 0%), but it was not statistically significant because it was obtained (p> 0.05).

REFERENCES

1. Nathalie KK. Intrauterine device insertion during the post-partum period: a systematic review. *Contraception*. 2009; 327–336.
2. Juklak BKKBN. *Petunjuk Pelaksanaan Promosi dan Konseling Kesehatan Reproduksi.* Direktorat Kesehatan Reproduksi BKKBN. Jakarta. 2011.
3. Indonesia, S. *Indonesia Demographic and Health Survey 2012.* Statistics Indonesia (Badan Pusat Statistik—BPS) in collaboration with the National Population and Family Planning Board (BKKBN) and the Ministry of Health (MOH). Jakarta. 2013.
4. Kittur S. *Enhancing contraceptive usage by post-placental intrauterine contraceptive devices (PPIUCD) insertion with evaluation of safety efficacy, and expulsion.* International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2012.

Received June 6th, 2018
Accepted June 28th, 2018
Correspondence: Ariadi, email : belantiraya@yahoo.com

Vol. 2, No. 2, Jul-Dec 2018
ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL
Alamat Korespondensi:
Ruang Redaksi Andalas Obstetrics and Gynecology Journal, Lantai 3 PPDS Obstetri dan Ginekologi Universitas Andalas, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127
Website:
http://jurnalobgin.fk.unand.ac.id/index.php/JOE
eISSN : 2579-8324 pISSN : 2579-8323

5. Grimes DA. Immediate post-partum insertion of intrauterine devices (Review). *The Cochrane Collaboration*. 2010.
6. Espey EM. Long Acting Reversible Contraception : Implan and Intrauterine Device. *American College of Obstetricians and Gynecologysts Practice Bulletin*. 2011.
7. Solter C. *ParticiPant 's Guide Intrauterine Devices (IUDs).* Watertown MA: Pathfinder International. 2008.
8. Thiery M. Immediate postplacental IUD insertion: a randomized trial of sutured (Lippes Loop and TCu22OC) and non- sutured (TCu22OC) models. *Contraception. 1983; 28*(4), 299-313.
9. I-Cheng Chi,M MD. Post-Cesarean Section Insertion of Intrauterine Devices. *American Journal of Public Health. 1984; 74*(11), 1281 - 1282.
10. Müller AL. Transvaginal ultrasonographic assessment of the expulsion rate of intrauterine devices inserted in the immediate post-partum period: a pilot study. *Contraception*. 2005; 192–195.
11. L Ryujin. Immediate Postplacental vs. Interval Postpartum Insertion of Intrauterine Contraception. *Kaiser Permanente Northern California, Division of Research*. 2011.
12. Çelen SA. Immediate postplacental insertion of an intrauterine contraceptive device during cesarean section. *Contraception*. 2011.240– 243.
13. Goldstuck ND. Intrauterine contraception after cesarean section and during lactation: a systematic review. *International Journal of Women's Health*. 2013. 811-818.
14. Treiman KM. IUDs-A New Look. *Population Information Program The Johns Hopkins University. 1998. XVI*(1). 1-26.
15. I Cheng CHI GF. Review Article Post-partum IUD contraception - a review of an international experience. *Advances in Contraception, 5. 1989.* 127 - 146.
16. Hernandez. Use of modified intrauterine device (IUD) TCu 380 with chromium filaments in the immediate post-partum. *Ginecologia y Obstetricia de Mexico. 2008. 68*, 70-76.

Received June 6th, 2018
Accepted June 28th, 2018
Correspondence: Ariadi, email : belantiraya@yahoo.com