

Profile of Postpartum Intrauterine Device Acceptors: A Descriptive Study at Balikpapan Army Hospital, East Borneo, Indonesia during November 2016 to November 2017

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Abstract: *Maternal and infant mortality rates are still a health problem in Indonesia. The factors that play a role are short distances between pregnancies, and too many children. To prevent this, long acting contraceptive use after delivery must be increased. The use of IUD is recommended as the most effective postpartum contraceptive method. Our aim was to find out the profile of postpartum IUD acceptors in mothers giving birth at the Balikpapan Army Hospital from November 2016 to November 2017. This study uses a retrospective descriptive method with secondary data sources. The data collected came from all mothers who gave birth and became postpartum IUD acceptors. The distribution of data displayed was age, amount of parity, education level, and previous contraception history. From the data sources obtained, found the total number of mothers giving birth was 642 people. The profiles of mothers who are acceptors are mostly women with an age range of 31-35 years as much as 52%, the number of parity 1 child is 48%, and the number of high school education is 68%. The number of mothers who have used previous contraception was 56%, with the most method being injectable contraception.*

Keywords: Postpartum, intrauterine devices, contraceptive

1. Introduction

The success of maternal health efforts, among others, can be seen from the maternal mortality rate (MMR) ratio. MMR is the number of maternal deaths during pregnancy, childbirth, and postpartum caused by pregnancy, childbirth, and postpartum or its management but not for other reasons such as accidents or falls in every 100,000 live births. Generally, there is five main causes of maternal death are known as bleeding, hypertension in pregnancy, infection, prolonged or congestion, and abortion. However, in Indonesia maternal deaths have been dominated by three main causes of death, namely bleeding, hypertension in pregnancy, and maternal infections.^[1]

A high-risk pregnancy is a pregnancy that has a risk of passing the baby, mother, or giving birth to a defective baby or pregnancy complications, which is greater than the risk in normal women generally. The cause of high-risk pregnancy in mothers is due to lack of maternal knowledge about reproductive health, low socioeconomic status, and low education. There are several high-risk pregnancy factors, which are too young, too old, the distance between pregnancies is too close (less than 2 years), too many children (more than 3 people).

Many couples who have children return after giving birth because they do not want the age of the child now with the next one too far away, some are due to the age factor so choose a short distance to give birth to the next child. Maternal death is a high risk if the birth distance is too close. The distance between pregnancies is very influential on the incidence of anemia during pregnancy, which will lead to worsening of the mother's condition during labor. In

addition, researchers also said that women with short intervals between two pregnancies would increase the risk of complications such as miscarriage and premature birth.

Family planning is the main preventive health service for women. according to WHO, family planning is an action that helps married couples to avoid unwanted births, adjust the distance between pregnancies, and determine the number of children in the family. Efforts in this family planning program can be temporary or permanent. There are several methods in family planning, such as simple contraceptive methods, hormonal contraceptive methods, intrauterine devices contraceptive methods, and secure contraceptive methods. The family planning program is one of the strategies to reduce maternal mortality, especially in conditions that are too young to give birth, give birth too long, give birth too often, and the distance between giving birth is too close. In 2016, the American College of Obstetricians and Gynecologists suggested the installation of direct long acting contraception methods after post-partum because it was proven to reduce unwanted pregnancy rates and avoid pregnancy intervals that were too close compared to hormonal contraceptive methods.^[2]

The long-term contraception method itself consists of reversible (intrauterine devices and implants) and irreversible (male or female sterilization). For couples who only want to delay pregnancy, the reversible method is the best choice. Among long acting reversible contraceptive methods, intrauterine contraceptive devices come out as superior choices.^[3]

In 2016, the profile of new users of contraceptives in Indonesia is as follows; [1] 51.53% used injection

contraceptive, [2] 23.17% used contraceptive pills, [3] 11.37% used implants, [4] 7.23% used intrauterine devices, [5] and the remaining 6.69% used other contraceptive methods. Meanwhile the profile of active contraceptive users is as follows; [1] 47.96% used injection contraceptive, [2] 22.81% used contraceptive pills, [3] 11.20% used implants, [4] 10.61% used intrauterine devices, [5] while 7.41% used other contraceptive methods. Contraceptive use in Balikpapan reached 81.6% of all reproductive age couples, with profiles as follows; [1] 46% used injection contraceptive, [2] 25.7% used contraceptive pills, [3] 5.9% used implants, [4] 15.4% used intrauterine devices, [5] 3.5% used tubectomy, [6] 3% used condoms, [7] 0.5% used vasectomy. ^[1] Based on the low number of intrauterine device users compared to hormonal contraceptive methods, which are less effective in preventing the distance between pregnancies too close when compared to intrauterine devices, the authors conducted a study to see how many intrauterine device users in postpartum mothers at the Balikpapan Army Hospital.

2. Methods

This study uses a retrospective descriptive method with secondary data sources. Data collected comes from medical records and contraceptive registrant books at Balikpapan Army Hospital. The study population was all mothers who gave birth at Balikpapan Army Hospital with the inclusion criteria of mothers using postpartum intrauterine device. The exclusion criteria used were women who did not give birth at Balikpapan Army Hospital, women who gave birth but did not use the intrauterine device as a postpartum contraceptive option, and women who gave birth but did not use postpartum contraception. The distribution of data displayed is age, total parity, level of education, and previous history of contraceptive use.

3. Results

Based on the data that has been collected regarding the profile of postpartum intrauterine device acceptors at Balikpapan Army Hospital from November 2016 to November 2017, the results will be presented in the form of narratives and diagrams. This study involved a total of 642 mothers who gave birth and then we took secondary data from medical records and contraceptive register books in the Obstetrics and Gynecology Department of the Balikpapan Army Hospital.

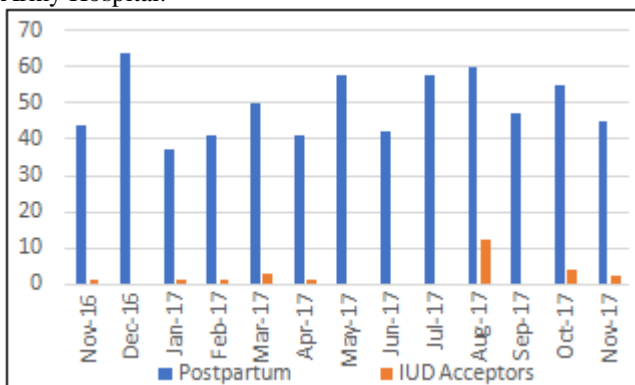


Figure 1: Comparison between postpartum mothers with postpartum IUD acceptors at Balikpapan Army Hospital

Of the total 642 mothers who gave birth in November 2016 to November 2017, only 25 people (3.89%) choose to use intrauterine devices as a contraceptive after birth, with the following data distribution;

Table 1: The number of postpartum IUD acceptors based on age

Age Range	Amount	Percentage
20-25	4	16%
26-30	9	36%
31-35	11	44%
≥ 36	1	4%
	25	100%

From the data presented in Table 1 it can be concluded that the postpartum intrauterine device acceptors age range at Balikpapan Army Hospital from November 2016 to November 2017 was the highest in the age range of 31-35 years as many as 11 people (44%), followed by the age range of 26-30 years as many as 9 people (36%). Women in the age range of 20-25 years were 4 people (16%), and women ≥ 36 years were 1 person (4%).

Table 2: The number of postpartum IUD acceptors based on the parity

Parity	Amount	Percentage
1 Child	14	56%
2 Children	8	32%
3 Children	2	8%
≥ 4Children	1	4%
	25	100%

From the data shown in Table 2, it can be concluded that the most postpartum intrauterine device acceptors come from mothers giving birth to 1 child as many as 14 people (56%), followed by 9 children (32%) with parity of 2 children. Intrauterine device acceptors with a parity of 3 children as many as 2 people (8%), and women with a parity of ≥4 children as many as 1 person (4%).

Table 3: The number of postpartum IUD acceptors based on level of education

Level of Education	Amount	Percentage
Elementary School	1	4%
Junior High School	1	4%
Senior High School	13	52%
College	10	40%
	25	100%

From the data shown in Table 3, it can be concluded that the most postpartum intrauterine device acceptors are senior high school graduates as many as 13 people (52%), followed by college graduates as many as 10 people (40%). Whereas acceptors with junior high school education are 1 person (4%), and from elementary school graduates 1 person (4%).

Table 4: The number of postpartum IUD acceptors based on previous contraceptive history

Contraceptive History	Amount	Percentage
Yes	16	64%
No	9	36%
	25	100%

Table 4 shows that 16 people (64%) became postpartum intrauterine device acceptors at the Balikpapan Army Hospital had used contraception before, and 9 people (36%) had never used contraception before.

Table 5: Type of contraception chosen before using a postpartum IUD

Type of Contraception	Amount	Percentage
Pill Contraceptive	5	31,25%
Contraceptive Injection	8	50%
Intrauterine Device	2	12,5%
Condom	1	6,25%
	16	100%

Table 5 shows that the type of contraception is chosen before the acceptor decides to use an intrauterine device. the most choice is injection contraceptive of 8 people (50%), followed by pill contraception was 5 people (31,25%), IUD was 2 people (12,5%), and condom contraception method was 1 person (6,25%).

4. Discussion

In this study it was found that postpartum intrauterine device acceptors at Balikpapan Army Hospital amounted to 3.89% of the total mothers who gave birth there. This is still considered unsatisfactory, which means the awareness of mothers who have just given birth to make the distance between pregnancies is still classified as lacking.

In terms of age, it was found that most postpartum intrauterine device acceptors were from the age range of 31-35 years at 44%, followed by the age range of 26-30 years at 36%, age range of 20-25 years at 16%, and age range above 36 year at 4%. This is consistent with research conducted by Kumar, et al, which is said that older women tend to be intrauterine device acceptors when compared to younger women. This is because along with increasing age and experience of the disease, can affect a mother to choose the method of contraception.^[4]

In terms of parity, it was found that most postpartum intrauterine device acceptors came from 1 child parity by 56%, 2 children parity by 32%, 3 children parity by 8%, and 4 children or more by parity by 4%. This is also in accordance with the research conducted by Eggebroten JL, et al, where there was a relationship between the number of parity and the mother's willingness to become an intrauterine device acceptor.^[5]

Mothers with the last education of senior high school are the most found, which is 52% of the number of intrauterine device acceptors, followed by 40% of college graduated, 4% of junior high school graduates, and 4% of elementary school graduates. This is consistent with research conducted by Tang JH, et al, where it was found that mothers with a good level of education tend to be able to choose the right contraceptive method for themselves.^[6]

Some postpartum IUD acceptors are people who have had contraception before, which is 64%, and the first to use contraception is 36%. The contraceptive method that was previously chosen was mostly injectable contraception

method by 50%, Pill contraception by 31.25%, IUD method by 12.5%, and condom method by 6.25%.

5. Conclusion

Most postpartum IUD acceptors at Balikpapan Army Hospital from November 2016 to November 2017 are women aged 31-35 years, have 1 child, have a senior high school education, and have a history of contraceptive use before.

6. Acknowledgements

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7. Disclosure

The authors declare no conflicts of interest.

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