

The Difference of Menopausal Age Between Depomedroxy Progesterone (DMPA) Injection Acceptors and Intrauterine Devices (IUD) Acceptors in Lubuk Buaya Public Health Centre Area.

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Abstract

Menopause is the point in time when menstrual cycles permanently cease after having amenorrhea for 12 consecutive months which does not occur due to pathological conditions. There are many factors that affect women menopausal age, one of them is contraceptive use history. Contraception is divided into hormonal and non hormonal one. Lubuk Buaya is an area with highest DMPA injection and IUD acceptors in Padang. The aim of this research: to show the difference of menopausal age between DMPA injection acceptors and IUD acceptors in Lubuk Buaya Public Health Centre area. This was analytical research with cross sectional method. The sample is divided into 2 groups (n1 = *Menopause* women with DMPA injection history, n2 = *Menopause* women with IUD history) and taken by using quota sampling. The collecting of data involves 70 respondents in Lubuk Buaya public health centre by using questionnaire. The data were analyzed by univariate and *T*-test bivariate analysis (≤ 0.05). Results showed 51.4% of respondents were 56-60 years old. The average history of contraceptive use 6 years for each groups. The result of bivariate analysis showed that there was a significant difference of menopausal age between DMPA injection acceptors and IUD acceptors ($p = 0.000$) with 3.2 years as mean difference. There was a difference of menopausal age between DMPA injection acceptors and IUD acceptors. It's expected women to be more selective to choose contraceptive method by considering the long term effects that arise related to menopausal age and its psychological and physical problems on it

Keywords : *Menopausal age*, DMPA acceptors, IUD acceptors

INTRODUCTION

Menopause is one phase of a woman's life which is marked by a permanent cessation of menstruation after 12 consecutive months of experiencing amenorrhoea which is not due to pathological conditions (Goodman et al., 2011). WHO in 2007 included data showing 25 million women worldwide are estimated to experience menopause each year and Asia is the region with the highest number of women experiencing the initial menopause in the world (Senolinggi *etal*, 2015). Ministry of Health of the Republic of Indonesia (2005), estimates that Indonesia's population in 2020 will reach 262.6 million people with the number of women living in menopause around 30.3 million people or 11.5% of the total population (Depkes RI, 2005).

During menopause onset progresses, there is a progressive decrease in estrogen and progesterone hormone levels which causes physiological changes in the form of physical and psychological changes (Syalfina, 2017). Physical changes that occur can include hot flushes, night sweats, changes in the urogenital system, insomnia, cardiovascular disease and bone disorders (osteoporosis) (Alva et al., 2016). While the psychological changes that occur are attitude that is easily offended or sensitive (Kusmiran, 2012).

Women who have early or faster menopause have a greater risk of developing cardiovascular disease and osteoporosis when compared to women who are menopausal at normal or late menopause (Edmonds,

2007; Katz, 2010). Syalfina said that from various studies and studies, 75% of people who experience menopause will feel menopause as a problem or disorder. While around 25% did not feel menopause as a problem (Syalfina, 2017).

The average age of menopause in women in the world is 45-55 years and in industrialized countries 51 years, but the age range of menopause in developing countries is 43-49 years (WHO, 2012). According to a cross sectional study conducted by Dr. Muharam, Sp. OG (K), the average age of menopausal women in Indonesia is 48

± 5.3 years (Santoso, 2015). The difference in the age of menopause is influenced by several things, one of which is a woman's history of contraceptive use (Kasdu, 2005).

Broadly speaking, contraception in Indonesia is divided into hormonal contraception and non-hormonal contraception. Unlike non-hormonal contraception which speeds up the age of menopause, hormonal contraception actually delays the age of menopause. This is supported by the results of

research conducted by Santoso conducted in 2013 and Khairani in 2015 that there is a significant difference in the age of menopause between hormonal and non-hormonal KB acceptors where the age of menopause hormonal KB acceptors is longer than the age of menopause non-hormonal birth control with difference in mean menopause age 2.84 years (Santoso, 2013; Khairani, 2015).

The highest number of hormonal and non-hormonal family planning acceptors in the working area of the Lubuk Buaya Public Health Center in Padang City were injectable family planning acceptors and IUDs, with 7767 injectable family planning acceptors and 1825 IUD family planning acceptors (Health Office, 2017). Based on the results of preliminary studies conducted on April 13, 2018 in the Lubuk Buaya work area, 10 postmenopausal mothers found 5 mothers with a history of DMPA (Depo Medroxyprogesterone Acetate) injectable birth control, 4 mothers with a history of IUD birth control and 1 mother with natural family history.

METHOD

This was analytical research with cross sectional method. The sample is divided into 2 groups (n1 = *Menopause* women with DMPA injection history, n2= *Menopause* women with IUD history)and taken by using quota sampling. The collecting of data involves 70 respondents in Lubuk Buaya public health centre by using questionnaire. The collected data were tested for normality using the Kolmogorov-Smirnov test and obtained $p > 0.05$ which showed normal distributed data, then performed univariate analysis and to determine differences in mean menopause age bivariate analysis was performed using Independent T-test (≤ 0.05).

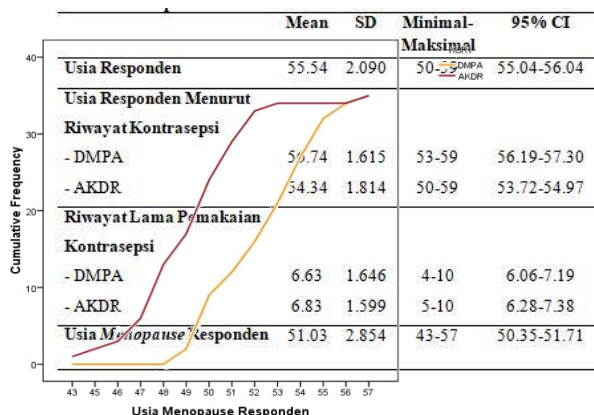
RESULT

Table1 Resepondent Age Distribution

Respondent Age	f	%
≤ 50	1	1.4
51-55	33	47.1
56-60	36	51.4
Total	70	100

Based on table 1 above it can be seen that out of 70 respondents, 36 respondents (51.4%) were 56-60 years old.

Table 1. Respondent Age, Age of Respondents According to Contraception History, Contraception Usage History, and Respondent's Menopausal Age



Based on table 2 the mean age of respondents with a history of DMPA injection was 56.74 years with a standard deviation of 1,615 and the mean age of respondents with a history of IUD was 54.34 years with a standard deviation of 1,814. The average history of the use of DMPA injection contraception and the long history of the IUD method used in respondents in the working area of Lubuk Buaya Health Center is 6 years.

The results of univariate analysis of the dependent variable with the ratio measurement scale in table 2 shows that the average age of menopause is 51.03 years with a standard deviation of 2,854 years.

Bivariate Analysis

Tabel 3. Differences Menopausal Age According to Contraception History

Metode Kontrasepsi	Mean	SD	SE	P value	n
DMPA	52.63	2.211	.374	.000	35
AKDR	49.43	2.524	.427		35

Table 3 shows that the mean menopausal age between groups of respondents with a history of injectable DMPA was longer than the group of respondents with a history of IUD. The results of statistical tests using the Independent T-test obtained p value = 0.000 ($p < 0.05$). Based on these results, it can be concluded that there are significant differences in menopausal age between DMPA injection and AKDR acceptor acceptors, which is 3.2 years in the working area of Lubuk Buaya Public Health Center.

IV. DISCUSSION

The results of univariate analysis of age frequency distribution of respondents showed that as many as 1 person (1.4%) of respondents with age ≤ 50 years, as many as 33 people (47.1%) respondents with ages 51-55 years and as many as 36 people (51.4%) aged 56-60 year.

The mean age of respondents was 55.54 (95% CI: 55.04-56.04), with a standard deviation of 2,090. The age of the youngest respondent is 50 years and the oldest respondent is 59 years. From the results of

the interval estimation it can be concluded that 95% believed the average age of respondents was 55.04 years to 56.04 years.

The mean age of respondents with a history of DMPA injection was 56.74 years with a standard deviation of 1,615. Age of respondent with the youngest DMPA injection history was 53 years and the oldest age was 59 years. From the results of the interval estimation it can be concluded that 95% believed the average age of respondents with a history of DMPA injection was 56.19 years to 57.30 years.

The mean age of respondents with a history of IUD was 54.34 years with a standard deviation of 1,814. The age of the respondent with the youngest history of IUD was 50 years and the oldest was 59 years. From the results of the interval estimation it can be concluded that 95% believed the average age of respondents with a history of IUD was 53.72 years to 54.97 years.

The results of univariate analysis showed that the average history of the use of DMPA contraceptive methods in respondents in the Lubuk Buaya Public Health Center working area was 6.63 years with a standard deviation of 1.646 with a history of the longest use of DMPA 4 years and the longest 10 years. From the results of the interval estimation it can be concluded that 95% is believed to be the average history of the duration of use of the DMPA injection contraceptive method of respondents was 6.06 to 7.19 years.

World Health Organization (2016) recommends maximum use of hormonal contraception for 2 years (WHO, 2016). However, in practice in the field, the use of hormonal contraception exceeds WHO's maximum recommendations. Based on direct interviews with respondents, this happened because of the influence of the KB acceptor comfort factors on hormonal contraception used, socio-economic factors in the family planning acceptor and the decision on the choice of contraceptive methods completely under the control of KB acceptors.

The average history of the use of

IUD contraceptive methods in respondents in the Lubuk Buaya Public Health Center working area was 6.83 years with a standard deviation of 1,599 with a history of the shortest IUD use period of 5 years and the longest 10 years. From the results of the interval estimation it can be concluded that 95% is believed to be the average long history of using the contraceptive method of the respondent's IUD is 6.28 to 7.38 years.

The mean menopausal age of respondents was 51.03 years (95% CI: 50.35-51.71), with a standard deviation of 2,854 years. This is in accordance with the average age of menopause according to WHO, which occurs between the ages of 50-52 years (WHO, 2012).

The mean menopausal age of respondents with a history of DMPA injection was 52.63 years with a standard deviation of 2,211. The mean age of menopause respondents with a history of IUD 49.43 years with a standard deviation of 2,524. The results of statistical tests using the Independent T-test showed that the mean menopausal age between groups of respondents with a history of DMPA injection was longer than the group of respondents with a history of IUD with a p value = 0.000 ($p < 0.05$). The significant difference between menopausal age (mean difference) between DMPA injection acceptors and IUD acceptors is 3.2 years in the working area of Lubuk Buaya Public Health Center.

This is in line with research conducted by Santoso (2013), Fibrila (2014) and Khairani (2015), that there are significant differences in the age of menopause between hormonal and nonhormonal contraception groups. Hormonal contraception works by suppressing ovarian function so that it does not produce ovum (Kumalasari, 2012).

According to Masruroh (2012) states that in women who have a history of hormonal contraception use, the content of the hormone progesterone in hormonal contraception has an impact on ovarian hormonal changes, then can stimulate the pituitary not to produce these hormones. These hormonal changes cause changes in the menstrual cycle.

Menstruation occurs because of the hormones estrogen and progesterone which stimulative stimulate the formation of the endometrium. The formation of these hormones is carried out by the ovary. Stimulation of the formation of these hormones due to FSH (follicle stimulating hormone) and LH (luteinizing hormone). The negative effects of these hormonal imbalances can cause the menstrual cycle to recede (Masruroh, 2012).

In women who use hormonal contraception will enter menopause longer so this is beneficial because it reduces the risk of cardiovascular disease or osteoporosis due to a decrease in the level of the progressive estrogen hormone entering menopause. However, long-term use of

hormonal contraception, especially DMPA injections will also have a negative impact, one of which is a change in serum lipids because progesterone in DMPA contraception facilitates carbohydrate to fat metabolism (Syarif, 2007).

Increased levels of serum lipids can cause hyperlipidemia so that it has the potential to experience blockages and narrowing of blood vessels by fat. This will interfere with the process of oxygen supply and food substances to all organs of the body. As a result, the heart is motivated to pump blood more strongly so that it can meet the blood demand for tissues so that blood pressure increases and is susceptible to the risk of high blood pressure (Ningsih, 2012).

CONCLUSION

Some respondents are in the postmenopausal phase, which is aged 56-60 years. The mean menopausal age of women with a history of injecting DMPA is longer than women with a history of IUD use.

There was a significant difference in mean menopause age between Depo Medroxyprogesterone Acetate (DMPA) injectable contraceptive and Uterine Contraception (IUD) contraceptives.

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