Factors Related to the <u>Incedent</u> of Cervical Cancer In Obstetrics & Gynecology Department at Ulin Hospital Banjarmasin

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ABSTRACT

Objective: Identify and analyze factors of cervical cancer related to the age of first married, parity, the use contraception in Obstetrics & Gynecology at Ulin Hospital Banjarmasin.

Methods: This research used analytical survey with the case-control approach. Sampling technique in the research was total sampling with 90 samples in Obstetrics & Gynecology at Ulin Hospital Banjarmasin. Data collection was by using a checklist with data processing chi-square test.

Results: Chi-square test shows that there was a significant relationship between the age of married first <20 years p = 0.023 with OR 2.0 more risk than age ≥20 years, parity> 3 p = 0.033 with OR 1.92 more risk than parity 1- 3, and prolonged use of contraceptive ≥4 years p = 0.025 with OR 0.50 was more risk than the duration of contraceptive use <4 years

Conclusion: There was a very significant relationship between the age of first marriage, parity and also the use of contraception with the incidence of cervical cancer.

Keywords: age of first married, Cervical cancer, contraceptive use, parity.

I.   INTRODUCTION

Cervical cancer is a gynecological disease that has a high level of malignancy and is the leading cause of death from cancer in women in developing countries. Cervical cancer is a malignancy that occurs in the cervix and is caused by infection with Human Papilloma Virus (HPV). In cervical cancer, the disease shows the existence of abnormal cells formed by tissue cells that grow continuously and not limited to the part of the cervix.

HPV is transmitted through sexual contact and the infection occurs in 75% of women who have had sexual intercourse. Cervical cancer in individuals suffering is associated with sexual and reproductive behavior, such as sexual intercourse at a young age, alternating sexual intercourse, multiple viral infections, smoking, as well as low daily hygiene levels, especially genital organ hygiene. In Indonesia is detected every hour of Indonesian women died of cervical cancer [1].

The frequency of cervical cancer is most prevalent in developing countries such as Indonesia, India, Bangladesh, Thailand, Vietnam, and Fhilifna. In the ASEAN region (Association of Southeast Asian Nation), the incidence of cervical cancer in Singapore was 25.0 in the Chinese race, 17.8 in the Malay race, and Thailand at 23.7 per 100,000 pk [2].

According to data from the Indonesian Cancer Foundation (YKI), 250,000 women worldwide die from cervical cancer and there are more than 15,000 new cases, of which approximately 8,000 deaths in Indonesia each year [3].

World Health Organization (WHO, 2009) obtained data 500,000 to 1,000,000 million new cases infected with cervical cancer each year. While data from the Global Burden of Cancer (GLOBOCAN) in 2008, data obtained in cases of cervical cancer worldwide reached 530,232 cases. Asia has 312,990 cervical cancers and both global and Asian numbers 58% die. A total of 2.2 million women in the world suffer from cervical cancer. Each year, there are approximately 400,000 new cases of cervical cancer, and as much as 80% occur in women living in developing countries. The country of Indonesia has the most cervical cancer compared with other developing countries [4,5].

Center for Data and Information Ministry of Health of Indonesia explained that cervical cancer and breast cancer is cancer with high prevalence in Indonesia in 2013, namely cervical cancer of 0.8% and breast cancer 0.5%, according to Riskesdes (2007) in Indonesia, every year an estimated 100 sufferers per 100,000 population. In addition, empirical data also shows that cancer deaths from year to year continue to increase. About 5.7% of all age deaths are caused by malignant cancers [6,7].

Ulin RSUD data show that based on register book Poly Ulin Banjarmasin South Kalimantan, period from January to December 2013 there are 125 new patients and 643 patients old cervical cancer patients, in the period January to December of 2014 there were

167 patients new and 937 long-term patients with cervical cancer and in the period January to December 2015 there were 155 new patients and 1536 patients with cervical cancer patients and data in 2016 from the period January to November there were 184 new patients and 1446 patients old data which is obtained here is the data that can be from the patient register book in Poly Ulin Wastewater Banjarmasin.

II.   METHODS

This research used analytical survey method with the case-control approach and sampling technique that used total sampling with 90 samples in Poly Content Ulin Banjarmasin Hospital. Data collection using a checklist with data processing using chi-square test.

III.   RESULT

The case distribution and control of the research are as follows:

Table 1. Case distribution and control of cervical cancer in RSUD Ulin Banjarmasin based on age of first married

Age of first married	Control	Case
< 20 year	61	46
	67,8%)	51,1%)
≥ 20 year	29	44
	32,2%)	48,9%)
amount	90	90
	100%	100%

Based on Table 1, the results of the research in Poly Ulin Banjarmasin, 90 respondents in the cervical cancer cases were found, 61 (67.8%) of respondents were <20 years old and 29 (32.2%) respondents aged ≥ 20 years. While 90 respondents in the control group, there were 46 (51.1%) of respondents aged <20 years and 44 (48.9%) respondents aged ≥ 20 years. This can be interpreted that the proportion of cervical cancer in the majority of respondents age of first married <20 years is 61 (67.8%).

Table 2 Case distribution and control of cervical cancer at Ulin Banjarmasin Hospital based on parity.

Parity	Case	Control
Parity 1-3	43	29
	47,8%)	32,2%)
Parity > 3	47	61
	52,2%)	67,8%)
Amount	90	90
	100%	100%

Based on table 2, as many as 90 respondents in the group of cervical cancer cases were found, it was known 43 (47.8%) respondents had parity 1-3 and 47 (52.2%) having parity> 3. While 90 respondents with control group, it is known 29 (32.2%) respondents who have parity 1-3 and 61 (67.8%) respondents who have parity> 3. This can be interpreted that respondents who experienced cervical cancer most common on the parity that ≥ 4 times, that is as many as 47 respondents (52.2%).

Table 3 Case distribution and control of cervical cancer based on contraception at RSUD Ulin Banjarmasin

Duration of Contraception Usage	Case	control
Duration of Contraception Usage < 4 years	33 (36,7%)	48 (53,3%)
Duration of Contraception Usage ≥ 4 years	57 (63,3%)	42 (46,7%)
amount	90 100%	90 100%

Based on table 3, as many as 90 respondents in the cervical cancer cases, 33 (36.7%) of respondents who used contraceptive <4 years and 57 (63.3%) of respondents using contraceptive ≥ 4 years. While 90 respondents in the control group, 48 (53.3%) of respondents were using contraception <4 years and 42 (46,7%) respondents using contraception ≥ 4 years. This can be interpreted that the respondents who experienced cervical cancer most common in respondents who use contraceptive ≥ 4 years, as many as 57 (63.3%).

Bivariate Analysis

Table 4. Summary of Chi-Square Test Results and Odds Ratio between First Time Married, Parity and Old Contraceptive Use with Cervical Cancer Incidence

Variable	p-value	OR	Confidence Interval 95% Lower limit	Confidence Interval 95% Upper limit
Age of first married < 20 year ≥ 20 year	0,02	2,0	1,10	3,68
Parity Parity 1-3 Parity > 3	0,03	1,92	1,05	3,52
Old Use of contraception < 4 year ≥ 4 year	0,02	0,50	0,27	0,91

The analysis result through Chi-Square test with 95% confidence level (p = 0,05) can be seen in table 4.

1. Relationship Analysis and the Risk of First Age Married to Cervical Cancer Occurrence

Based on table 4 obtained value p (value) = 0,023 at α = 0,05. Because the value of p (value) 0.023 <0.05 indicates that there is a relationship between the age of first married respondent to the incidence of cervical cancer, the value (OR = 2.0; CI = 95%) meaning that age <20 years is at risk for exposed to cervical cancer 2.0 times greater than in patients aged ≥ 20 years.

2. Relationship Analysis and Risk of Parity with Cervical Cancer Incidence

Result of statistical calculation with Chi-Square test obtained p-value (value) = 0,033 at α = 0,05. Because the value of p (value) 0.033 <0.05 indicates that there is a relationship between the parity of respondents with the incidence of cervical cancer, the value (OR =

1.99; CI = 95%) which means that parity> 3 times the risk for cervical cancer 1.92 times greater than those with parity 1-3 times.

3. Relationship Analysis and Risk of Use Contraception with Cervical Cancer Occurrence

The results of statistical calculations with Chi-Square test obtained p-value (value) = 0.025 at α = 0.05. Because the value of p (value) 0.025 <0.05 indicates that there is a relationship between contraceptive use of the respondent and the incidence of cervical cancer, the value (OR = 0,50; CI = 95%) which means that the use of contraception in long-term ≥ 4 at risk exposed to cervical cancer 0.50 times greater than in patients who use contraception <4 years.

IV. DISCUSSION

The incidence of cervical cancer in Indonesia is 100 per 100,000 population per year. Data collected from 13 pathology and anatomical laboratories in Indonesia show that the frequency of cervical cancer is highest among existing cancers. Cervical cancer also increases in a person married to <20 years of age at risk of cervical cancer 10-20 times, and women with high parity that is ≥ 4 times at risk 5.5 times for cervical cancer. Age is one of the risk factors considered to affect the prognosis of the patient and affect the immune system maturity. The incidence of cervical cancer that is still high at older age shows each community's lack of desire to do pap smear [8].

According to the literature, the age of first marriage is a risk factor for the incidence of cervical cancer with a large risk 2.0 times, to experience cervical cancer in women who perform the marriage at <20 years of age compared with marriage at age ≥ 20 years. Age at marriage <20 years is closely related to sexual activity.

Sex is ideally done after a woman is fully mature. The size of maturity is not just seen from menstruation or not. At a young age, mucosal cells in the cervix are not yet mature. Generally, new mucosal cells mature after women aged 20 years and over. Different results, if sexual intercourse is done over 20 years, where mucosal cells are no longer too susceptible to changes. At <20 years, mucosal cells in the cervix are not yet mature, generally new mucosal cells mature after women aged ≥ 20 years. This means that immature mucosal cells are still susceptible to stimuli, so they are not ready to receive external stimuli, including chemical substances under the sperm so that mucosal cells can change the nature of cancer cells. Having unprotected sex especially at a young age allows for HPV infection. Three of the four new cases of HPV infection attack young women (15-24 years). HPV virus infections can occur within the first 2-3 years they are sexually active. The nature of cancer cells is always changing at any time ie dead and growing again. With the stimulus, the cell can grow more from dead cells, so the growth is not balanced. Excess cells can eventually change the nature of cells into cancer cells [9].

Cases of cases with parity> 3 are very high at 52.2%. Based on a statistical test of chi-square known that parity> 3 times increases cervical cancer risk as much as 1.92 times greater than parity 1-3 times. According to literature parity is a risk factor for the incidence of cervical cancer with a large risk of 4.55 times for cervical cancer in women with parity> 3 compared to parity 1-3 [9].

Cases of cases with parity> 3 are very high at 52.2%. Based on statistical test chi-square known that parity> 3 times increases the risk of cervical cancer as much as 1.92 times greater than the parity 1-3 times. According to the parity, literature is a risk factor for the incidence of cervical cancer with a great risk of 4.55 times for cervical cancer in women with parity> 3 compared with 1-3 parity [9].

A case-control study in Turkey showed> 3 increased the risk of cervical cancer by 9,127 (p = 0.002) [10]. Parity increases the risk of cervical cancer in women with persistent HPV infection (HR 1.78, 95% CI: 1.07-2.94) [11].

This is evidenced in a cohort study) where it was found that HPV infection is easier to find in women already given birth than never before, HPV infection is easier to find in pregnant women than non-pregnant. In addition, in pregnancy, there is a decrease in cellular immunity. This shows that parity is a risk factor for the incidence of cervical cancer with 1.92 times greater risk of cervical cancer in women with a parity of> 3 compared with women with 1-3 parity [12].

Based on the literature, oral contraceptives used in the long term that is more than 4 times can increase the risk of 1.5-2.5 times. WHO reported a relative risk of oral contraceptive use of 1.19 times and increased according to the duration of use.

Hormonal contraception is an attempt to prevent pregnancy by using hormonal Hormonal contraception can increase cervical cancer because the cervical tissue is one of the most preferred targets for steroid hormone in women, growth in cervical lenders that increase tissue susceptibility so that changes from the immune response that add susceptibility to infection virus [13].

Oral contraceptives may take the form of combination, sequential, mini or post-intercourse pills and are reversible. Combined oral contraceptives are a mixture of synthetic estrogens such as ethinylestradiol and one of the several C19 steroids with progesterone activity such as norethindrone. This contraceptive contains a fixed dose of estrogen and progesterone. The use of estrogen can be risky because it stimulates the thickening of the endometrial wall and stimulates the endometrial cells thus changing the nature to cancer.

Based on literature other than women infected with HPV, women who also use contraceptives for long periods of time, for example, more than four years or more can be more at risk of developing cervical cancer. duration of use of contraception in a woman more than 35 years old with cervical cancer

stage at RSUD Kota Semarang that cervical cancer patient more with long use of contraception under 4 year that is 30 respondent (62,5%). In addition to the long use of contraception, there are other factors causing cervical cancer, such as family history, frequent washing of vagina with antiseptics not recommended by doctors, smoking habits, vaginal powder, sexual behavior, parity, age [14].

V. CONCLUSION

Based on the results of research and discussion it can be concluded that there is a significant correlation between the age of first married <20 years with the incidence of cervical cancer, there is a significant relationship of parity> 3 with the incidence of cervical cancer and there is a significant relationship between the use of contraception> 4 years with the incidence of cervical cancer in Poly Ulin Hospital Ulin Banjarmasin.

IV. REFERENCES

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