

Age and parity with pre-cancer lesions in cervical cancer foundation of South Kalimantan Indonesia region 2016-2017

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Abstract

Cervical cancer is a gynecologic cancer incidence and cause of death have the second highest in the world, estimated at 80% of cervical cancer cases occur in developing countries. Cervical cancer in its early stages rarely cause complaints and when women consult a medical 70% are at an advanced stage that it is difficult to cure. Cervical cancer is caused due to infection of human papillomavirus (HPV) and exacerbated by several risk factors including age and parity. The purpose of this study was to determine the relationship of age and parity with the incidence of pre-cancerous lesions of the cervix. This is a case-control study comparing cases and controls in each variable. The sample used in this study using a ratio of 1: 1 in 310 people in the control group and 310 as cases of people taken at random by means of the control group and the total sample in the case group. Data collection tools used books patient reports and statistical tests using Chi_Square. The results in this study found an increased risk for 2,049 times in women aged ≥ 35 years and 2,046 fold increased risk in women who have children ≥ 3 with the incidence of pre-cancerous lesions of the cervix. So there is a significant relationship between age and parity with the incidence of pre-cancerous lesions of the cervix. The results in this study found an increased risk for 2,049 times in women aged ≥ 35 years and 2,046 fold increased risk in women who have children ≥ 3 with the incidence of pre-cancerous lesions of the cervix. So there is a significant relationship between age and parity with the incidence of pre-cancerous lesions of the cervix. The results in this study found an increased risk for 2,049 times in women aged ≥ 35 years and 2,046 fold increased risk in women who have children ≥ 3 with the incidence of pre-cancerous lesions of the cervix. So there is a significant relationship between age and parity with the incidence of pre-cancerous lesions of the cervix.

Keywords: Age; Parity; Pre-cancer lesions



INTRODUCTION

Changes in lifestyle are getting an instant result of the development of the era that continues to advance not only have an impact on technological, social, economic and cultural but also makes good views of a disease of the pattern and number of diseases both infectious and non-infectious diseases. Non-communicable diseases such as cancer remains a scourge in many countries, both countries have developed and are still developing. One non-communicable disease is still the world spotlight is cervical cancer. Cervical cancer is cancer that is caused by the growth of abnormal cells in the cervix take place over a long period of time before it turns into a malignancy (cancer of the cervix).

In the World by Global Burden Of Cancer (Globocan) in 2012 identified cervical cancer as the fourth highest cancer for all women, but is the second highest in women aged 15-44 years (ICO HPV Information Center, 2017). Based on reports from the International Agency For Research On Cancer (IARC) there are about 527 624 new cases and 265 675 deaths attributable to cervical cancer. When compared with the data Globocan 2002, more than 80% of cancer deaths occur in developing countries and in 2008 rose to 88% (Alliance for cervical cancer prevention. 2011), in the year 2012 rose to 90% (Oppah Kuguyo et al. 2017) and is estimated in 2030 to 98% (Alliance for cervical cancer prevention. 2011).

Cases of cervical cancer in developing countries is in second place after breast cancer (World Health Organization, 2016). Globocan data in 2008 showed that the incidence of 450,000 new cases with 240,000 deaths from cervical cancer cases (Alliance for cervical cancer prevention. 2011). 15.7 of every 100,000 women in developing countries are identified with cervical cancer, these figures show a higher incidence than the world's average incidence is 14 per 100,000 women (ICO HPV Information Center 2017).

As a developing country, Indonesia ranks fourth in the territory of Southeast Asia with the highest incidence of cancer cases after Cambodia, Myanmar, and Thailand. Based on the report by the World Health Organization (WHO), cervical cancer is the most common cancer is second only to breast cancer in women that affect women aged 15 to 44 years (Agustina Nurcahyanti DR., 2016). Based on data from the WHO in 2008 estimated daily occur 38 new cases and 21 women die from cervical cancer (Center for Data and Information of the Ministry of Health, 2015) and in 2012 was estimated new cases of cervical cancer in Indonesia as many as 20 928 cases with an incidence of 17.3 per 100,000 women (Didik Setiawan et al. 2016).

The high cases of cervical cancer are caused due to infection of Human Papilloma Virus (HPV) and some other risk factors such as coitus at a young age, multiple sexual partners, smoking, use of oral contraceptive pills more than five years, a history of cervical cancer in the family, parity high number of children born more than 3, age, low immunity due to malnutrition or other systemic diseases. older age factors increase the risk of cervical cancer as much as 0.52% is due to the decrease of the immune system of a woman at the time of menopause, high parity increases the risk as much as 2.10% and by not doing coitus at age less than 20 years can reduce the incidence of cervical cancer as much as 1.75%. (Makuza et al., 2015),

The psychological impact of the presence of cervical cancer that is the shame and withdraws from the surrounding environment, is horrified by the situation right now, a sense of self-blame and anxiety that these impacts will affect the body image that will affect the relationship with the partner, as well as sexual problems and reproductive women who develop cervical cancer (Herzog and Wright, 2007), In terms of the economy, the impact of cancer on the losses caused due to disability and death inflicted in 2008 amounted to \$ 895 billion. Losses due to cancer 19% higher than the diseases

caused by cardiovascular which is a disease with the number of incidents and deaths worldwide but only leads to a loss of \$ 753 dollars (American Cancer Society, 2010).

RESEARCH METHODS

This research is a descriptive correlation case-control by conducting a retrospective approach. The 2016-2017 year of data collection is done by looking book reports of patients who have a Pap test in the Indonesian Cancer Foundation South Kalimantan area.

The population in this study were women who had a Pap test in the Indonesian Cancer Foundation with a number of comparison samples is 1: 1 as many as 620 people, divided into 310 cases and the rest is included in the control group. In the control group of samples taken by simple random sampling and the case group by total sampling. Test subset of the statistics used in this study using the Chi-square test was used forsee the relationship between the age of parity with the incidence of pre-cancerous lesions of the cervix, the calculation is done with computerization.

RESULTS AND DISCUSSION

From table 1 it can be seen that the respondents who have been screened at age characteristics of risk and less risk no differences are too far is to the age at risk as much as 315 people (50.8%) and the remaining 305 (49.2%) are in men aged less risk.

Women who perform cervical cancer screening at parity characteristics showed that more women were screened in groups of two or more parity-risk groups in the amount of 76.6% or as many as 475 people.

From table 1 that the women did most of the cervical cancer screening are women who've had a previous child with a number of 549 persons or 88.5%. Characteristics based contraceptive status obtained from 620 respondents were selected in the study of 392 people or 63.2% of women using hormonal contraception.

Table 1. Distribution frequency characteristics of women who have been screened in Indonesian cancer foundation South Kalimantan

No.	Characteristics	Amount	
		f	%
1	Age		
	a. Risk \geq 35 years	315	50.8
	b. Less Risk $<$ 35 years	305	49.2
2	Parity		
	a. Risk $>$ 2	475	76.6
	b. Less Risk \leq 2	145	23.4
3	Pregnancy status		
	a. ever Pregnant	549	88.5
	b. Had never been pregnant	71	11.5
4	Status contraception		
	a. hormonal	228	36.8
	b. non-hormonal	392	63.2
	TOTAL	620	100

Table 2. Cross-tabulation of the relationship of age with the incidence of pre-cancerous cervical lesions

Age	The sample group				P Value	odds Ratio
	Non Pre-cancerous lesions		Pre-cancerous lesions			
	N	%	n	%		
Less Risk <35 years	125	59.7	180	41.9	00:00	2,049
Risk \geq 35 years	185	40.3	130	58.1		
Total	310	100	310	100		

Table 3. Parity with the incidence of pre-cancerous cervical lesions

Parity	The sample group				n	P Value	odds Ratio
	Non Pre-cancerous lesions		Pre-cancerous lesions				
	n	%	n	%			
Less Risk	257	82.9	218	70.3	475	00:00	2046
Risk	53	17.1	92	29.7			
Total	310	100	310	100			

Based on the statistical test using chi-square analysis in Table 2 shows that there is a significant correlation between age and the incidence of pre-cancerous lesions of the cervix in Indonesia Regional Cancer Foundation South Kalimantan in 2016-2017 and an increased risk in women who have aged \geq 35 years of as much as 2,049 times higher than in young women aged <35 years.

In table 3 it was found that the number of parity a woman associated with the incidence of pre-cancerous lesions of the cervix and an increased risk of 2,046 women who had children more than two people. Because the value of $OR > 1$ then parity is one of the risk factors that cause pre-cancerous lesions of the cervix, and on the value of confidence interval (CI) with a confidence level of 95% is obtained that parity significantly affected the pre-cancerous lesions of the cervix in women. It can be shown that the parity contributes to the incidence of pre-cancerous lesions of the cervix.

Infection of Human Papilloma their virus is the cause of the onset of pre-cancerous lesions of the cervix, as well as any other factors that may facilitate the spread of the virus and into the development of abnormal cells in the cervix. The risk factors that can lead to cervical cancer, among others parity, coitus at a young age, the use of hormonal contraceptives old, changing sexual partners, age, unhealthy lifestyle, alcohol use and smoking (Shields et al., 2004).

Results from this study showed that patients with the data pre-cancerous lesions and is in therapy in cancer foundation southern Kalimantan region of Indonesia in 2016-2017 there were 310 women were identified pre-cancerous lesions of the cervix with the total number of women who have been screened for cervical cancer as much as in 2464, this shows that each of the eight women who have cervical cancer screening, there is one person who identified pre-cancerous lesions.

Every woman has a risk of developing cervical cancer, but not all women realize that cervical cancer can be found early by screening on a regular basis to carry out checks, so if their symptoms can be treated immediately lead to malignancy. The risk factors were analyzed in this study relates to the incidence of pre-cancerous lesions are age and parity for women.

At the age variables in this study may boost the risk of cervical cancer as much as 2,049 times for pre-cancerous lesions. Relationships increased risk occurred in ≥ 35 years of age are manifestations of the hormonal changes and the length of time of exposure to a carcinogen and the decline in a woman's immune system. At the time of menopause may change into abnormal cells, thereby increasing the life of someone ladies then the possibility of changes in the cells of the cervix become abnormal can be higher than in women who are at a young age.

The older the woman, the higher the risk for cervical cancer it corresponds with other studies stating an increased risk of cervical cancer stage in women aged between 21-34 years at 16.63% to 42.44% in those aged > 70 years (Stacey et al. , 2012). In addition, any woman who is getting older has from 23% to 40% for a period of 34 years (Rasjidi., 2009).

In a study stating that the incidence of cancer increases related to increasing age, this corresponds to a decrease in the body's immunity and exposure that have occurred as well as any change in instability hormone (Mary C. White., 2015). Genomic and epigenetic changes can lead to cancer-related to the length of life of a woman this is caused by the accumulation of mutations or increased time of vulnerability at age increasing to an oncogenic mutation (Hanahan D., 2011).

While the variable parity in this study increases the risk of pre-cancerous lesions as much as 2,046 times it has in common with the results conducted another study done that out of 500 women who check pre-cancerous lesions of the cervix gained as much as 85% have pre-cancerous lesions in women who are at risk (Basri., 2014). The other study was conducted by AB Miller also has similarities with the results of this research that high parity associated with an increased risk of cervical cancer and the birth of their first child at a young age and have many children increases the risk of cervical cancer 3 times. (AB Miller, Et al., 1980).

In the journal British Journal of Cancer, said women who give birth may increase the occurrence of CIN 3+ than in women who have or do not have children (KE Jensen, et al., 2013). CIN 3+ is a condition of lesions in the cervical part of the state the lesions have not exceeded the basement membrane. But with the addition of parity that many will increase the risk of cervical cancer due to injury that occurs in the cervix and spacing pregnancies each associate will occur development of cells in the cervix become abnormal. The effect of parity on the incidence of cervical cancer by Swandari (2010) stated that the occurrence of cervical cancer in women who have high parity allegedly caused by hormonal changes or immunological resulting vulnerability occurs against infection from human papillomavirus, and the effects of trauma repeatedly in the cervix will increase the exposure to HPV infection (Swandari., 2010).

Cervical cancer does not only cause problems from the physical aspect but also have an impact on the psychological aspect. Therefore urgently needed treatment in the prevention of pre-cancerous lesions before they turn into cancer. Reduction of cervical cancer malignancy can be done in three ways, namely primary, secondary and tertiary. Prevention of primary can be done by way of an increase or intensification of health promotion in the community to be able to have a healthy life and avoid those factors which may be an increased risk of cervical cancer with secondary prevention with screening for cervical cancer regularly either Infection Visual acid acetate (IVA) or a Pap smear in health facilities and if necessary can perform tertiary prevention by vaccination(Septadina., 2015),

There is support from all parties in the prevention of cervical cancer in the need to reduce the burden on countries as well as patients themselves. Early prevention can be done by all parties, among others, intensify promotion of reproductive health which is expected to increase the knowledge and awareness to be living a healthy life as well as with a regular screening as regular health monitoring efforts.

CONCLUSION

Pre-cancerous lesions of the cervix are the early stages of cervical cancer if not treated appropriately. Early detection to look for signs of pre-cancerous lesions of the cervix by doing a visual inspection examination and Pap smear acetic acid which has been a healthcare program throughout the first level. Papilloma human infection of virus and added to the other risk factors will increase the risk of pre-cancerous lesions and eventually become cancerous. Risk factors for cervical cancer include parity, an age of first coitus, a less healthy lifestyle, age, sexual promiscuity and use of hormonal contraceptives old. In this study, it was found that age and parity variables are variables related to the incidence of pre-cancerous lesions.

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