

Cervical Cancer in Women of Childbearing Age

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Abstract

Cervical cancer is one of the most common neoplastic diseases suffered by women in the world. The number of people with cervical cancer is nearly 500,000 new cases every year and kills 270,000 women every year. About 85% of cervical cancer events occur in developing countries, so cervical cancer is the main cancer for women in developing countries. Prevention of cervical cancer consists of primary, and secondary prevention. Primary prevention in the form of delaying the onset of sexual activity until the age of 20 years and being in monogamous contact will significantly reduce the risk of cervical cancer; the use of barrier contraceptives (condoms, diaphragms, and spermicides) that play a role in protecting against viral agents.

Keywords:

Cervica; Cancer; Women; Childbearing Age

Introduction

Cervical cancer is one of the most common neoplastic diseases suffered by women in the world. The number of people with cervical cancer is nearly 500,000 new cases every year and kills 270,000 women every year. About 85% of cervical cancer events occur in developing countries, so cervical cancer is the main cancer for women in developing countries. The presence of cervical cancer results in a decrease in the quality of life in women as sufferers. In addition, high mortality and morbidity rates in women are due to such cases (Munoz *et al.*, 2013, Nojomi *et al.*, 2014; Wittet and Tsu, 2014 ;). In Indonesia, cervical cancer is also the most common cancer found among other gynecological cancers.

Cancer is the abnormal growth of a cell or tissue where it grows and develops uncontrollably, the speed at which it grows is excessive, and often interferes with other organs. Cervical cancer is a primary malignant neoplasm of the uterine cervical organ (Desen, 2014). Cervical cancer is a cancer that originates and grows on the cervix, specifically originating from the epithelium or the outer layer of the cervical surface and is 99.7% caused by HPV virus infection (Samadi, 2014).

In Indonesia, cervical cancer is also the most common cancer found among other gynecological cancers. The incidence of cervical cancer is around 7.9% in the world ranks second out of all cancers in women with a death incidence rate of 9.3% of all cancers in women in the world (IARC, 2014). According to the World health organization (WHO, 2014), there are 528,000 cases and 85% occur in

developing countries with deaths reaching 266,000 and it is estimated that in 2020 there will be an increase in the number of sufferers reaching 20 million people per year. According to WHO, in Indonesia cervical cancer ranks second only to breast cancer. There were 20,928 new cases of cervical cancer and deaths from cervical cancer with a percentage of 10.3% (WHO, 2014).

Molecular epidemiological evidence indicates that the main cause of invasive cervical cancer is a human papillomavirus (HPV) of a certain type (Munoz *et al.*, 2013, Munoz *et al.*, 2012). Nojomi *et al.* (2014) in theory says some of the risk factors of cervical cancer are sexual intercourse at an early age, sexual behavior with many partners, women with male sexual partners who have sexual behavior of many partners, women with high parity, smoking, race and low socioeconomic status.

Cervical cancer has been considered a preventable cancer because it has a long preinvasive phase and the treatment of preinvasive lesions has been effective, in addition to which cervical cytological screening programs have become available. After all cervical cancer is becoming a significant healthcare problem worldwide.

In developed countries the incidence and mortality rate of cervical cancer has decreased, which is about 4-6% of all cancer diseases in women. This is due to the success of early detection programs, where Papsmear screening is becoming more popular and preinvasive cervical lesions are more commonly detected than invasive cancers. However, in general cervical cancer still occupies the second most in female malignancies (after breast cancer) and is estimated to be suffered by 500,000 women worldwide each year.

There is a number of evidence that shows *the Human Papilloma Virus* (HPV) as the most common factor causing cervical neoplasia. HPV is a virus that is widely transmitted through sexual intercourse. There is other evidence that is the viral oncogeneity of animal papillomas; infectious association of cervical HPV with condylomas and coyotocytotic atypicals indicating mild or moderate dysplasia; and detection of HPV and DNA antigens with cervical lesions. HPV types 6 and 11 are closely related to mild dysplasia that is often regression. HPV types 16 and 18 are associated with severe dysplasia that rarely regresses but is often progressive into insitu carcinoma (Rasjidi, 2014).

HPV virus belongs to the family of papovaviruses of a DNA virus. The virus infects the basal membrane of the area of metaplasia and the zone of cervical transformation. After infecting cervical epithelial cells in an attempt to multiply, the virus will leave its genome sequences in the host cell. The HPV genome in the form of episomal cells (circular and not integrated with the host's

DNA) is found in the CIN and is integrated with the host's DNA in invasive cancers. In in vitro experiments HPV was able to turn cells into immortals.

The relationship of HPV with cervical cancer was first sparked by Harold Zur Hassen in 1980. The link between HPV infection and cervical cancer appears to be stronger when compared to smoking and lung cancer. Infection occurs through direct contact. Condom use is not safe enough to prevent the spread of this virus because condoms only cover part of the genital organs while the labia, scrotum, and anal area are not protected (Edianto, 2014).

Although it has been proven that HPV virus infection is the main factor causing cervical cancer, not all women infected with the HPV virus will develop into cervical cancer. There are several cofactors that play a role in the occurrence of cervical cancer, including:

1) Other infectious agents

Although all Herpes Simplex Viruses (HSV) type 2 have not been demonstrated in tumor cells, *insitu* hybridization techniques have shown that there is specific RNA HSV in female tissue samples with cervical dysplasia. Trikomonas infections, syphilis, and gonococci were found to be associated with cervical cancer. However, this infection is believed to arise due to sexual intercourse with many partners and is not considered as a risk factor for cervical cancer directly (Rasjidi, 2014).

Women infected with HPV and other sexually transmitted agents, such as *Chlamydia trachomatis* or herpes simplex virus type 2 (HSV-2), are more susceptible to cervical cancer. Based on the results of an analysis of seven control case studies that studied the effects of HSV-2 infection on the etiology of invasive cervical cancer, it was found that in women with DNA-HPV positive, HSV-2 was associated with an approximately three-fold increased risk of cervical cancer events (Smith JS., 2012).

2) Sexual intercourse

Cervical carcinoma is thought to be a sexually transmitted disease, where some evidence suggests a link between the history of sexual intercourse and the risk of this disease. In accordance with the etiology of the infection, women with multiple sexual partners and women who begin sexual intercourse at a young age will increase the risk of developing cervical cancer.

Because cervical columnar cells are more sensitive to metaplasia during adulthood, women who have sex before the age of 18 will be at five times the risk of developing cervical cancer. Both, both the age at the time of first intercourse and the number of sexual partners are strong risk factors for the occurrence of cervical cancer (Rasjidi, 2014).

3) Age

Based on the age group of sufferers, the incidence of cervical cancer is low at the age of < 20 years, and increases rapidly and persists at the age of 50 years; while *in situ carcinoma* begins at a younger / early age and reaches a peak at the age of 30-34 years, while dysplasia reaches a peak at the age of 20-29 years and decreases to the age of 50-59 years and increases again at an older age (Aziz, 2014).

The incidence of cervical cancer is highest at the age of 45-54 years both by location and primary tumors (Indonesian Association of Pathologists, 2012). From this it can be seen that cervical cancer mainly affects women in productive ages.

4) Parity

Yang includes pregnancies that are too close to the distance of pregnancy, the delivery process of women with many children is estimated to have recurrent cervical trauma, the age of the first partus <20 years, the relative risk of cervical cancer events is 3.28 times that of women with the age of the first partus >26 years, women who smoke, women who use hormonal contraceptives for more than 10 years, women with a family history of having experienced cervical cancer, also in women of low socioeconomic groups, it may be related to diet and immunity. (McFarlane-Anderson, 2014). (American Cancer society, 2012).

Pregnancy can increase the risk of cervical cancer due to the fact that the pregnancy maintains a transformation zone in the *ectocervical* region during pregnancy, thereby increasing the likelihood of being infected with the HPV virus. Women with high parity are associated with the occurrence of cervical columnar epithelial eversion during pregnancy which causes a new dynamic of immature metaplastic epithelium that can increase the risk of cell transformation as well as trauma to the cervix resulting in persistent HPV infection. The number of metaplastic cells in the transformation zone has been shown to increase during pregnancy (Munoz, N., et al, 2012). These cells are most susceptible to HPV infection in the immatur phase (Hinkula, M., et al., 2004). This was proven in a cohort study where it was found that HPV infection is easier to find in pregnant women than those who are not pregnant. In addition, in pregnancy there is a decrease in cellular immunity (Sawaya et al, 2013; Moodley et al, 2013).

According to Wiknjosastro (2014) women with many children are estimated to experience recurrent cervical trauma, so the cervix in these women is easy to develop infections. The occurrence of too frequent infections of the cervix can lead to the occurrence of cervical cancer. In addition to repeated

childbirth, the risk also increases if childbirth occurs at an early age. From a survey of spinning women in Shanghai, in women with the age of the first partus <20 years, the relative risk of cervical cancer incidence was 3.28 times that of women with the age of the first partus >26 years (Dessen, 2014).

Women who smoke have twice the risk of developing cervical cancer than non-smokers. The chemicals found in cigarettes after being sucked through the lungs are widely distributed throughout the body through the bloodstream. Some of these compounds can damage DNA in cervical cells and contribute to the emergence of cervical cancer (*American Cancer society*, 2012). There are currently data supporting cigarettes as a cause of cervical cancer and the relationship between smoking and squamous cell cancer in the cervix (not adenoscumose or adenocarcinoma). The mechanism of action can be direct (the mutational activity of cervical mucus has been shown in smokers) or through the immunosuppressive effects of smoking (Rasjidi, 2014).

The estimated risk factor for cervical cancer is the use of hormonal contraceptives. Hormonal contraceptives play the role of a tool that heightens the growth of the neoplasm. This has happened since the discovery of the role of estrogen which has a *trophic* effect in increasing cell growth. Women who used hormonal contraceptives in the form of pills or injections for less than five years did not experience an increased risk of uterine cervical carcinoma. However, an increased risk will appear after its use for 10 years (McFarlane-Anderson, 2014). Guven et al (2014) hypothesized that the viscosity of mucus in the cervix due to the use of birth control pills supports cervical cancer. This is because thick cervical mucus will prolong the presence of a carcinogenic agent (cancer-causing) in the cervix that is carried away during sexual intercourse, including the presence of the HPV virus.

An additional risk factor for cervical cancer is a family history of having had cervical cancer. Family history, especially those with mothers or sisters who have suffered from cervical cancer, where the risk is two to three times. Some families show a higher incidence of suffering from cervical cancer. Some scientists believe that they carry genetic conditions so they are more susceptible to HPV infection. (*American Cancer Society*, 2012).

According to Veralls (2013) women in low socioeconomics tend to start their sexual activity at a younger age. Cervical cancer is commonly found in low socioeconomic groups related to nutrition and immunity, in low socioeconomics generally the quality and quantity of food is lacking this affects the body's immunity.

Women with early-stage and pre-cancerous cervical cancer usually do not show obvious symptoms. Symptoms often do not begin until the pre-

cancerous state becomes invasive and invades the surrounding tissues. In other words, new symptoms appear when invasive cancer has occurred. When this happens, the most common symptoms are Women with early-stage and pre-cancerous cervical cancer usually do not show obvious symptoms. Symptoms often do not begin until the pre-cancerous state becomes invasive and invades the surrounding tissues. In other words, new symptoms appear when invasive cancer has occurred. When this happens, the most common symptoms are :

- 1) Abnormal pervaginam hemorrhages that at an early stage can occur unusual bleeding such as bleeding after sex (intercourse), bleeding after menopause, bleeding and spotting between menstrual periods, and menstrual bleeding with a longer or more time than usual. In addition bleeding after douching, or after deep examination is also a common symptom of cervical cancer (Mardjiko, 2014). abnormal pervaginam bleeding that in the early stages can occur unusual bleeding such as bleeding after sex (intercourse), bleeding after menopause, bleeding and spotting between menstrual periods, and menstrual bleeding with a longer or more time than usual. In addition bleeding after *douching*, or after deep examination is also a common symptom of cervical cancer (Mardjiko, 2014).
- 2) Vaginal discharge is also a frequent symptom. Unusual discharge from the vagina, in the form of vaginal discharge that may contain blood and can occur between menstrual periods or after menopause (American Cancer Society, 2012). With the progression of the disease, the secretion increases, it is diluted like water, smells fishy, and when an infection occurs a foul odor and is purulent (Desen, 2014). The color also becomes yellowish. In such cases, the growth of the tumor becomes ulcerative (Mardjiko, 2014).
- 3) Patients can complain of severe pain, which generally appears in the moderate, advanced stage, or when accompanied by an infection. Pain can be felt when the sufferer has sexual intercourse. Often located in the lower abdomen, regiogluteal or sacrocoxygeal. Lower middle abdominal pain may be due to cervical cancer lesions, parametrium accompanied by infection, or accumulation of fluid in the uterine cavum. The intermittent cramping pain of the lower abdomen on one or both sides may be caused by compression or invasion of the tumor so that the ureters are obstructed and dilated. Lower limb, gluteal, and sacrum pain is generally caused by the urging or invasion of the tumor against the pelvic cavital nerve (Desen, 2014). Pain in the pelvis or in the hypogastric tract can be caused by necrotic tumors or pelvic inflammation. If pain appears in the lumbosacral area, hydronephrosis can be suspected or spread to the lymph nodes that extend to the lumbosacral

root. Pain in the epigastric tract arises when the spread hits higher lymph nodes (Randall, 2014).

Prevention of cervical cancer consists of primary, and secondary prevention. Primary prevention in the form of delaying the onset of sexual activity until the age of 20 years and being in monogamous contact will significantly reduce the risk of cervical cancer; the use of barrier contraceptives (condoms, diaphragms, and spermicides) that play a role in protecting against viral agents. The use of latex is more recommended than condoms made from goatskin; The use of HPV vaccination given to patients can reduce HPV infection because it has the ability to protect >90% (Rasjidi, 2014). This vaccination is more useful when given to women who have never been infected with HPV (Mayrand, 2017). Then Stanley (2014) said that now there are two latest HPV L1 vaccines available, namely the quadrivalent HPV 6/11/16/18 and HPV 16/18 bivalent products. The protection of this vaccine lasts up to 5 years. This vaccine will reduce but not eliminate the risk of developing cervical cancer. Both vaccines are highly immunogenic and well tolerated.

Secondary prevention consists for patients with moderate risk and high risk patients. Pap's test results that are negative three times in a row with a time difference between examinations of one year and on the instructions of a doctor are highly recommended. For patients (couples of sexual intercourse) whose level of activity is unknown, it is recommended to perform a Pap test annually on patients with moderate risk. Meanwhile, in high-risk patients, patients who start sexual contact at the age of <18 years and women who have multiple sexual partners should take a Pap test every year, starting with the onset of sexual *intercourse* active. The current interval can be lowered to every 6 months for patients at particular risk, such as those with a history of recurrent sexual illness (Rasjidi, 2014)

Circumcision in sexual partners is also a primary preventive measure because it is able to reduce the risk of cervical cancer (Castellsagué et al., 2012). In addition, there is now an HPV immunization vaccine available for the prevention of cervical cancer. However, in any case vaccination cannot shift early detection measures and not all women are encouraged to do this immunization.

If a woman has experienced a precancerous lesion, then the preventive action she can take is a secondary preventive measure, which is an effort to prevent further damage by carrying out immediate treatment. Meanwhile, tertiary preventive measures are intended for women who have cervical cancer. This last preventive action aims to prevent the emergence of complications due to this disease (Sukardja, 2000).

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In this article, researchers perform obstetric Care in Mothers with Cervical Cancer using an obstetric management mindset according to Varney and documenting care in the form of SOAP.

Method

This study used an interview method in a 45-year-old mother referred from a regional hospital with suspicion of having cervical cancer. Researchers are interested in conducting an in-depth analysis of this case because of the need to analyze what causative factors can cause the mother to suffer from cervical cancer as well as discussing the gaps in theories and cases found.

Result and Discussion

Some time ago, the mother checked herself into a level one facility in the area where she lived, with a complaint made by the mother in the form of her stomach feeling often almost and the mother experienced frequent discharge of blood spots outside the menstrual cycle. The mother is then advised to do further examinations to the Regional Hospital for ultrasound. After an ultrasound was carried out at the hospital, the mother was referred to the referral hospital to get a more complete facility with the results of an ultrasound of suspicion of cervical cancer.

Mom married once, at the age of 13, the length of marriage was 35 years. Live with husband. Husbands often get calls from outside the area to be coolies of buildings. The mother and family seemed a little anxious about her situation. The husband and family support the treatment and hope to get treatment soon.

After anamnesis is performed, the mother is taken to the procedure room for further examination and a biopsy will also be performed, the doctor declares the mother has cervical cancer.

The obstetric care provided to Mrs.S can be obtained subjective data, namely the age of the mother 45 years. According to Bradshaw *et al.* (2012) many mothers are diagnosed with cervical cancer at the age of >40 years because the incubation process of cervical cancer takes a long time, namely 3-7 years. Based on the 2018 report on the recording of patients of the Surabaya General Hospital, the prevalence of cervical cancer cases tends to increase along

with the increase in the age of patients. Most of the cases were found in vulnerable aged >45 years, namely as many as 40 cases were raised in vulnerable aged 15-24 years with 1 case and vulnerable aged 25-45 years with 33 cases.

Signs and symptoms in cervical cancer include abdominal pain, bleeding during sex, bleeding outside of menstruation or *postcoitus*, pervaginam bleeding after menopause, foul-smelling vaginal discharge, reduced appetite, weight loss, fever, back pain, swollen legs or difficulty defecating in advanced cervical cancer (Nugroho and Utama, 2014; Health Info World, 2017). The signs and symptoms of cervical cancer appear in part in the mother. The mother came to Surabaya Hospital with complaints of lower abdominal pain, blood spots and bleeding after sexual intercourse. From the anamnesis data, it was also obtained that the mother for the past 3 months had a yellow and odorous discharge.

The mother said the menstrual cycle during the examination process is irregular, often has spots between the menstrual cycles and a yellow-smelling discharge arises. In normal women, there is generally no bleeding outside the menstrual cycle in the form of spots. Meanwhile, in women with cervical cancer bleeding outside the menstrual cycle and post-menopausal pervaginam bleeding is a common symptom. Blood spots can come from fragile cervical tissue and easily shed (Prawirohardjo, 2011). Generally, the discharge is yellow, clear, watery and odorless. In advanced phase cervical cancer, foul-smelling pervaginam fluid comes out (Prawirohardjo, 2011).

The mother used injectable contraceptives for 3 months where the contraceptive did not provide protection against HPV exposure and the mother had a risk of contracting HPV. Contraceptives that are able to protect against infectious diseases outside of sexual origin are condoms (Saifuddin, 2014).

Mothers have never suffered from HIV / AIDS, sexually transmitted diseases, gonorrhea, syphilis, or changed partners. None of the mother's family members have cervical cancer. In mothers with sexually transmitted diseases, the incubation time travels faster because there is a decrease in the immune system than in healthy women (Gomez-Lobo V., 2009). According to Aziyah, Sumarni and Ngadiyono (2017) the tendency to suffer from cervical cancer is 5.1 times greater in women who have a hereditary history of cervical cancer than patients who do not have a hereditary history of cervical cancer due to the fragility or mutation of suppressive genes against mutagens (Cowin, 2009).

Mom married once at the age of 13. The husband's job is a building coolie who often goes out of town. Having sex for the first time at the age of <13 years makes the mother more at risk for cervical cancer even though the mother only has one sexual partner, namely the mother's husband. At the age of <13 years,

the mucosal cells of the cervix are immature. That is, it is still susceptible to stimuli so it is not ready to receive external stimuli. Including those chemical substances that sperm carry. Because they are still vulnerable, mucosal cells can change their nature to cancer (Diananda, 2007). In adolescence, the endocervical position is more advanced in the future so that it is easier to experience exposure to HPV infection. HPV may have started to become infected since the mother was young but symptoms have just appeared at the age of the mother >40 years due to the long incubation time of cervical cancer which is 3-17 years.

The mother did not complain of any vomiting nausea or decreased appetite. Complaints of vomiting nausea and decreased appetite usually appear in patients with post-chemotherapy (Trijayanti, 2016). Meanwhile, the mother's condition is still in the stage of determining the diagnosis so she has not received any therapy.

Before the mother experienced complaints related to cervical cancer, the mother only changed her panties 1x / day. After experiencing complaints in the form of signs of cervical cancer symptoms, the mother then gets an IEC regarding hygiene and maternal hygiene patterns change. Mom often changes into panties with a material that absorbs sweat / cotton, 2x / day, chick from front to back and never uses vaginal cleaning fluids. According to Ilmiawati and Kuntoro (2017) the hygiene of the reproductive organs can be done through cleaning the vagina from front to back carefully and slowly, avoiding the use of fragrance / *antiseptic* continuously because it will interfere with the normal flora in the vagina, change panties 2-3 times a day, use clean panties and cotton material, pinch your hands before squeezing the vagina, shave vaginal hair once every 7-40 days to reduce vaginal moisture, using comfortable dressings during menstruation. According to the Minister of Health of the Republic of Indonesia (2018) improper hygiene patterns can trigger the development of infection-causing germs which are usually characterized by the presence of colored, smelly and itchy flour albus.

According to Romauli (2011) in mothers with cervical knaker will usually experience a decrease in the frequency of sexual intercourse due to discomfort due to pain during conjugal relations and the presence of blood discharge after sexual intercourse. In the case found, Mrs.S said she had not had sexual intercourse for 3 weeks because she felt pain and blood came out during the last secular intercourse.

The mother said she did not smoke but in the neighborhood there was an active smoker, the patient's husband. According to both active and passive smokers have a risk for immunosuppressants, DNA damage of squamous

epithelial cells and other effects of carcinogenic materials in Rasjidi cigarettes (2009).

In addition to lower abdominal pain, the mother also complained of anxiety about her condition because she had cancer. There are cases of disorders of the reproductive system with Ca Cervix usually the patient will feel anxious about his state. This is common to be encountered due to complications from cancer itself which can cause death so as to make clients anxious (Christiani, 2017).

After anamnesis, the mother then gets an objective comprehensive examination. The general state of the mother both with the awareness of mentis compost, vital signs and the mother's BMI is still within normal limits. Physical examination of the eye found no signs of anemia. In some cases anemia can be found in people with cervical cancer due to bleeding between two menstrual cycles, postcoitus and postmenopause (Romauli, 2011). Examination of the genitalia found fresh blood discharge. On examination of the genitalia it was found that portio was open and there was a reddish erosion around the portio the doctor suspected of leading to stage IB cervical cancer and for further examination a biopsy procedure will be performed for the PA and a biopsy procedure will be performed in the VK room. Based on the depth of the lesion, the stage of cancer can be classified as ib-1 stage. According to *The International Federation of Gynecology and Obstetrics* (FIGO) (Rasjidi, 2010) stage 1b-1 cancer is limited to the cervix and is greater than stage 1a-2. At this stage lesions begin to show. Stage 1b-1 lesions are less than equal to 4 cm in size.

Conclusion

The patient comes with complaints of lower abdominal pain, comes out of the birth canal and brings the results of the PA examination of the suspect cancer secretivx. Based on the results of the anamnesis carried out, there were changes in the menstrual pattern of the mother who complained of blood spots between the menstrual cycle and the onset of flour albus which was yellow and smelled bad. Risk factors for cervical cancer in mothers are the use of contraceptives other than condoms, marriage and sexual intercourse <13 years old, the condition of the husband who often works outside the city, hygiene patterns and habit patterns. The therapy provided is supportive therapy to provide support and make up anxiety. Pharmacological therapy is given to reduce complaints of maternal lower abdominal pain and increase the mother's immunity.

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