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Cervical Cancer: A Health Limiting Condition

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Abstract

Cervical cancer; a health limiting condition focuses on defining the concept of cervical cancer, enumeration of the risk of cervical cancer, explaining the preventive measures, describe the various staging of cervical and finally discuss the various health limitations associated with this very condition. Studies has shown that the following factors such as smoking, grandmultiparity, immunosuppression, sexually transmitted infections (like HIV, Chlamydia infections) Genetic, etc. can increase the susceptibility of an individual to cervical cancer, while human papilloma virus (HPV) has been implicated as a major causative agent to cervical cancer. However, cervical cancer can as well be prevented through primary and secondary preventive measures. The primary prevention is aimed at protecting uninfected women from being exposed to human papilloma virus while secondary prevention is aimed at increasing the health seeking behaviour of those at risk for early detection and management to achieve better prognosis of the disease. The size or extent of cervical cancer can generally be determined using either "TNM staging system or Number staging systems" and the bigger the size, the higher the limitations to the patient. The limitations of cervical cancer comes as a result of advanced cervical cancer or side effect of treatment and this cut across the patient's physiological, Psychological, family and social health respectively. This necessitates the specific roles of nurses both in prevention and treatment of cervical cancer respectively. Thus, when all these efforts are put in place it would help to curb both the incidence and severity of cervical cancer.

Keywords: Cervix; Cancer; Health; Limitations

Introduction

Cervical cancer is the most common genital cancer and one of the leading causes of death among female population. It accounts for approximately 12% of all cancers in women and it is the second most common cancers in women worldwide most especially in developing country, Nigeria inclusive [1]. In 2000, over 471000 new cases of cervical cancer were diagnosed and 288000 deaths recorded worldwide and approximately 80% of these deaths occurred in developing countries (WHO, 2002). Another study conducted by Ferlay, et al. [2] also shows that women in developing countries accounts for about 85% annual Morbidity and mortality (estimated at 493000 cases and 273500 deaths) worldwide.

Nigeria has been ranked as the 10th country with global cervical cancer burden with mortality rate of 22.9 deaths per 100 [3]. Similar reports also revealed that about Forty-eight million women are at risk of cervical cancer, 17,550 women are diagnosed yearly, 9, 659 women die annually and 26 women on daily basis in Nigeria (Ifeoma, 2014). This is very alarming as it has become a major public health issue in the developing countries. The burden of the disease is considerable with associated morbidity and mortality among women in their productive years [4].

Cervical cancer therefore, is an invasive malignant tumor in nature which tends to spread like every other malignancy to other parts of the body, Human papilloma virus 16 and 18 has been identified as major causative agents involved in high risk of cervical cancer accounting for about 60% and 15% cases of cervical cancers respectively (while other HPV genotypes accounts for the remaining 25%) which can be primarily transmitted through sexual intercourse [5].

The most important risk factor for cervical cancer is infection by the human papilloma virus (HPV). HPV is a group of more than 150 related viruses, some of which cause a type of growth called papillomas, which are more commonly known as warts. These HPVs are grouped into low and high risk HPVs respectively. The low-risk types of HPV are those types which hardly cause cancer but may cause warts on or around the female and male genital organs and in the anal area (such as HPV6 and 11), While the high risk are those HPV Which are linked to caners most especially HPV 16 and 18 which causes about two-thirds of all cervical cancers [6]. According to Saslow, et al. [5], the following lifestyles increases the chances of one becoming infected with these Human papilloma virus that causes cervical cancer such as multiple sex partners having multiple full-term pregnancies, smoking, chlamydia infection, immune suppression, being overweight, long-term use of oral contraceptives, diet low in fruits and vegetables. Being younger than 17 at your first full-term pregnancy, Poverty, some chemotherapy (e.g. Diethylstilboestrol) and lots more. The details of these risk factors would be unveiled as we go on in subsequent pages of this work.

For the purpose of which this work is been used for, it would be focusing on the concept of cervical cancer, risk associated of cervical, the prevention strategies, various stages of this carcinoma, the limitations associated with this condition and finally state the nursing implications of cervical cancer. Therefore, it will be of great important for us to give audience as we progress through the work.

Objectives

By the end of this presentation, the participants should be able to:

- Define the concept of cervical cancer
- Describe the risk factors of cervical cancer
- Describe the preventive measures of cervical cancer

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- Describe the various staging of cervical cancer
- Discuss the various Limitations associated with the cervical cancer
- Discuss implications of cervical cancer to nursing

Concept of Cervical Cancer

It is of utmost important that we understand vividly what Cervix and Cancer is all about before delving into Cervical cancer, on this note we need to have a brief review of the Anatomy of female reproductive system.

What is cervix?

Cervix is simply the neck of the womb or uterus. According to American Cancer Society [5], Cervix is the lower part of the uterus (womb) which connects the body of the uterus to the vagina (birth canal). Similarly, cervix is a pelvic organ and the lower part of the uterus connecting the body of the uterus above to the vagina below. In a non-pregnant woman, the cervix is usually between 2 and 3 cm long and roughly cylindrical in shape with its narrow central running along its entire length.

Parts

Cervix has 2 main parts: the part closest to the body of the uterus is called the endocervix while the part next to the vagina is the called exocervix (or ectocervix). The 2 main types of cells covering the cervix are squamous cells (on the exocervical parts) and glandular cells (on the endocervical part) [5]. It also has two (internal and external) openings popularly referred to as "Os". The internal cervical Os (opening) connects the uterus to the cervix while the external cervical Os connects the cervix to vagina.

Course and relation: Cervix is surrounded by the following structures as follows; superiorly uterus, inferiorly by vagina, anteriorly by urinary bladder, posteriorly by rectum and laterally it's associated with pelvic walls, cervical ligaments and broad ligaments on both side [7].

Blood supply: Descending branch of uterine artery.

Nerve supply: By autonomous nervous system (sympathetic and parasympathetic nerves).

Lymphatic drainage: Lymph is drained from the cervical area to many other pelvic lymph glands [7] (Figure 1).

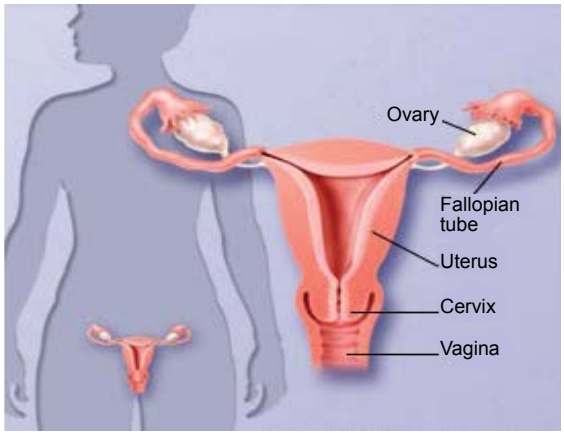

Figure 1: Female Reproductive System.

What does cancer mean?

Cancer refers to an abnormal growth of cells which tends to proliferate (grow) in an uncontrolled way and in some cases metastasize (spreading to other parts). Cancer is said to have occurred when abnormal cells divide in an uncontrolled way which may eventually spread into other tissues [8]. Human body is made up of more than a hundred million (100,000,000,000,000) cells, Cancer starts with changes in one cell or small group of cells which does not respond to control signals making the cell to grow and multiply uncontrollably into a lump or tumour. These Mutations (changes) can happen either by chance when a cell is dividing or by the processes of life inside the cell or even by things coming from outside the body and some people can inherit faults in particular genes that make them more likely to develop a cancer. Therefore, having grasped the basic knowledge of cervix and cancer, let's take a look at cervical cancer.

Cervical cancer is simply the cancer of the cervix which starts in the cells lining the cervix. Thus, it is a malignant tumor arising from the epithelia cells of cervix which start from a long period of loss in uniformity of the individual cells as well as their architectural orientation [9]. Cancer of the cervix is the most common cancer affecting the female reproductive tract. There are two main classifications of cervical cancer:

- Squamous cell carcinoma – cancer of the epithelial lining of the ectocervix.
- Adenocarcinoma – cancer of the glands found within the lining of the cervix.

The majority of cervical cancers are squamous cell carcinoma (80-85%) while the remainders are adenocarcinoma in origin. Human papilloma virus (HPV) has been implicated as the primary cause and this has to be present for the diagnosis of cervical cancer to be made [1].

The pathogenesis of cervical cancers are multi-factorial and various studies have established the following predisposing factors such as history of Sexual transmitted infection (HIV, Herpes simplex virus, Chlamydia infections), multiple sexual partner, early onset of sexual activities, smoking, prong use of oral contraceptive, genetic, immune-suppression, grandmultiparity, diethylstilbestrol, poverty and so on [5]. Thus, once the diagnosis if this condition is established, the carcinoma in situ (CIN) progresses from pre-cancer stage to cancer stage. If the condition is detected early enough, the prognosis will be good but in a situation where it was not identified on time, it would lead to various complications and disabilities which would be discussed later in this work.

Risk Factors of Cervical Cancer

Some factors have been identified to increase ones chances of being infected with Human papilloma viruses that causes cervical cancer. Many of these factors have been established in numerous studies across the globe. Studies carried out by Saslow et al., [5] revealed that the following factors increases the susceptibility of individual to cervical cancer Thus, the factors include:

Smoking

When someone smokes, they and those around them are exposed to many cancer-causing chemicals that affect organs other than the lungs. These harmful substances are absorbed through the lungs and carried in the bloodstream throughout the body. Women who smoke are twice more likely to get cervical cancer than non-smokers. Tobacco by-products have been found in the cervical mucus of women who

smoke. Researchers believe that this substance damages the DNA of cervical cells and may contribute to the development of cervical cancer. Smoking also makes the immune system less effective in fighting HPV infections.

Immune-suppression

Human immunodeficiency virus (HIV), the virus that causes AIDS, damages the immune system and puts women at higher risk for HPV infections. This might explain why women with AIDS have a higher risk for cervical cancer. The immune system is important in destroying cancer cells and slowing their growth and spread. In women with HIV, a cervical pre-cancer might develop into an invasive cancer faster than it would have been. Another group of women at risk of cervical cancer are those taking drugs to suppress their immune response, such as those being treated for an autoimmune disease (in which the immune system sees the body's own tissues as foreign and attacks them, as it would fight a germ) or those who have had an organ transplant.

Grandmultiparity

Women who have had 3 or more full-term pregnancies have an increased risk of developing cervical cancer. No one really knows why this is true. One theory is that these women had to have had unprotected intercourse to get pregnant, so they may have had more exposure to HPV. Also, studies have pointed to hormonal changes during pregnancy as possibly making women more susceptible to HPV infection or cancer growth. Another thought is that pregnant women might have weaker immune systems, allowing for HPV infection and cancer growth.

Early onset of sexual activities

Studies has shown that women who were younger than 17 years when they had their first full-term pregnancy are at higher risk (almost 2 times more likely) to get cervical cancer later in life than women who waited to get pregnant until they were 25 years or older. This is based on the fact that those who started childbearing earlier are most likely exposed to greater number of sexual intercourse in their life time (than those that married lately) thereby increasing their chances of becoming infected with Human Papilloma Virus.

Genetic

Cervical cancer may run in some families. If one's mother or sister had cervical cancer, the person's chances of developing this condition is about 2 to 3 times higher than if no one in their family had it. Some researchers suspect that some instances of this familial tendency are caused by an inherited condition that makes some women less able to fight off HPV infection than others. In other instances, women from the same family as a patient already diagnosed could be more likely to have one or more of the other non-genetic risk factors.

Prevention of Cervical Cancer

The most common form of cervical cancer starts with pre-cancerous changes and there are ways to stop this disease from developing. The first way is to find and treat pre-cancers before they become true cancers, and the second is to prevent the pre-cancers. A well-proven way to prevent cervix cancer is to have testing (screening) to find pre-cancers before they can turn into invasive cancer. The Pap test (or Pap smear) and the human papilloma virus (HPV) test are used for this. The Pap test (or Pap smear) therefore, is a procedure used to collect cells from the cervix so that they can be looked at under a microscope to find cancer and pre-cancer. Early detection greatly improves the chances of successful treatment and prevents pre-cancerous cell from becoming cancerous. Thus, the Prevention strategies are broadly classified into 2 major grouped as follows:

Primary prevention strategies

This is aimed at protecting uninfected individual women from being exposed to human papilloma virus and it can be achieved through;

Vaccination: HPV vaccination helps to reduce the chances of getting cervical cancer. It works by building natural immunity against specific types of HPV targeted by the vaccines. The vaccine is recommended for every woman as from the ages of 9 years and above so as to build immunity against HPV16 and 18 which have been identified to be the prime cause of cervical cancer [10].

Delayed onset of sexual intercourse: Delaying the onset of sexual intercourse to at least 20 years will allow full maturation of the transformation zone making it less vulnerable to Human papilloma Virus [11].

Secondary prevention

This is aimed at increasing the health seeking behaviour of those at risk for early detection and management. This can be achieved through:

PAP smears screening: This is recommended to every woman starting from 3 years of post coital exposure and or from 20 years of age and above. The frequency of the screening is directly proportional to the increasing risk of the cervical cancer. Women with immune-suppression, smokers, grandmultiparity, etc. should be biannually while the low risk individual should be 1-2 years interval [12].

Intensified Awareness creation: This is targeted at informing almost every woman on the existence of Pap smear as well as inculcates the consciousness in them. This can be achieved through the use of I.E.C (information, education and communication) materials, Mass media, News headlines and health education.

Staging of Cervical Cancer

Staging is a way of describing the size of a cancer and how far it has grown. There are two main types of staging systems for cancer according to [13,14], these are the TNM system and the number system.

The TNM staging system

TNM stands for Tumour, Node, and Metastasis. This system describes the size of the initial cancer (the primary tumour), whether the cancer has spread to the lymph nodes, and whether it has spread to a different part of the body (metastasized). The system uses numbers to describe the cancer.

- T refers to the size of the cancer and how far it has spread into nearby tissue - it can be 1, 2, 3 or 4, with 1 being small and 4 large.
- N refers to whether the cancer has spread to the lymph nodes - it can be between 0 (no lymph nodes containing cancer cells) and 3 (lots of lymph nodes containing cancer cells).
- M refers to whether the cancer has spread to another part of the body - it can either be 0 (the cancer hasn't spread) or 1 (the cancer has spread).

For example, a small cancer that has spread to the lymph nodes but not to anywhere else in the body may be T2 N1 M0. Or a more advanced cancer that has spread may be T4 N3 M1.

Number staging systems

Number staging systems usually use the TNM system to divide cancers into stages. Most types of cancer have 4 stages, numbered from 1 to 4. In most cases, it is written in Roman numerals. So you may see stage 4 written down as stage IV.

Stage 1: Usually means that a cancer is relatively small and contained within the organ it started in. It means that the cancer is just in the neck of the womb. Stage 1 is often divided into Stage 1A and Stage 1B. In stage 1A the growth is so small it can only be seen with a microscope (or colposcope) while in stage 1B, the growth can be seen without a microscope. Cancerous areas are larger, but the cancer is still only in the tissues of the cervix and has not usually spread.

Stage 2: Here, the cancer has not started to spread into surrounding tissue but the tumour is larger than that of stage 1. Sometimes stage 2 means that cancer cells have spread into lymph nodes close to the tumour. Here, cervical cancer has begun to spread outside the neck of the womb into the surrounding tissues. But it has not grown into the muscles or ligaments that line the pelvis (pelvic wall), or to the lower part of the vagina. Stage 2 is further divided into Stage 2A and Stage 2B.

Stage 3: Usually means the cancer is larger. It may have started to spread into surrounding tissues and there are cancer cells in the lymph nodes in the area. In stage 3 cervical cancer, it has spread away from the cervix and into surrounding structures in the pelvic area. It may have grown down into the lower part of the vagina and the muscles and ligaments that line the pelvis (pelvic wall). And it may have grown up to block the tubes that drain the kidneys (the ureters). It can be divided into Stage 3A and Stage 3B. Stage 3A is when the cancer has spread to the lower third of the vagina but not the pelvic wall while Stage 3B means the tumour has grown through to the pelvic wall or is blocking one or both of the tubes that drain the kidneys.

Stage 4: Means the cancer has spread from where it started to another body organ. This is also called secondary or metastatic cancer. Stage 4 cervical cancer is advanced cancer. Here, cervical cancer has spread to other body organs outside the cervix and womb. It can be divided into:

- Stage 4A
- Stage 4B

Stage 4A is when the cancer has spread to nearby organs such as the bladder or rectum (back passage) while in Stage 4B, the cancer has spread to organs further away, such as the lung.

Various Health Limitations Associated with the Cervical Cancer

Limitation here refers to impairment of activities of daily living and body function (such as physiological and psychosocial processes) which makes the affected individual to become dependent on significance others for the performance of those activities she would have performed unaided. According to Cancer research UK [8], Limitations of cervical cancer occur as a result of advanced cervical cancer or side effect of treatment. Thus, these limitations are grouped into physiological, Psychological, family and social limitations respectively.

The Family health limitation

According to a research conducted by Arrossi, et al. [15], which Show that cervical cancer affects the six (6) basic domains of family life. Viz: employment, income, household budget, education, access to health-care, and child care. This simply means that the disease burden of cervical cancer is not only directly to the patient but also to the entire member of their family and this goes a long way to confirm the saying that "when a member of family is sick, the entire members are also sick" especially here in Nigeria where we live communal life. Thus, let's take a look at the various family limitations in details.

Loss of family income: The chronic nature of this condition-cervical cancer disease affects the family income such that the money that would have been used for family welfare and upkeep would be diverted towards treatments (radiotherapy, chemotherapy and surgery as the case may be), the total earnings of the family may be invested into the treatment and when the income are exhausted they may resort to selling of property or use of savings in order to pay up the bills leaving the family with little or nothing to care for the other members of this family and these would make the family vulnerable to malnutrition and this places the health of the entire family members at risk [15].

Reduction in household budget: Due to loss of family income, the family budget might be affected in such a way that the quantity of food consumed daily would be reduced and also delay in payment of essential services such as school fees, security fees, electricity or telephone. This may cause the family to live from hand to mouth as a result of difficulty posed by this condition [15].

Education disruption: In this same study conducted by Arrossi et al., [15], the result shows that about 28% of household's children of patients with cervical cancer regularly missed school days. This may be attributed to either lack of income and inability to pay the child or children's school fees or lack of human resources to care for the children and go for school runs. Thus, these children may be withdrawn from school thereby disrupting their educational prowess. Moreover, as poverty increases, more children (especially girls) may be kept out of school for lack of school fees, books, or uniforms, but also so that they can contribute to family income through work [16].

Limited access to health-care: Moreover, the ability of the other members of this family to access health care even in minor health conditions is drastically limited due to financial constraint created by this chronic disease -cervical cancer, this is based on the fact that the bulk of the family income have been invested into the treatment and in cases where they afford the initial treatment the follow up care might be difficult to comply. This was also confirmed in the study of Arrossi et al., [15], which shows an increased risk of non-compliance to treatment regimen in patients from households that lost family income to the chronicity of cervical cancer.

Child care deficit: The physical and psychological care of child in the household of patient with cervical cancer is usually affected such that little or no attention is given to the child and as a result this child psychosocial development might be affected, as the mother who is the home manager is away from home to seek for medical treatment. This affects the general wellbeing of the children (or child as the case may be) because nobody will care for a child better than his or her biological mother [15].

Psychological health limitations

Emotional disruption: The emotional impact of living with cervical cancer is very significant such that many people report experiencing a "rollercoaster" effect which is feeling down when the diagnosis of cervical cancer is received and feeling better when removal of the cancer has been confirmed and may feel down again when you come to terms with the after-effects of your treatment (such as hysterectomy). This type of emotional disruption can sometimes trigger.

Depression: Typical signs of depression include feeling sad, hopeless and losing interest in things you used to enjoy [17].

Mood swing (unstable temperament): Despite the efforts of the patient's significant person or persons to make the patient cheer up, in the attempt to reciprocate their care and love makes her to smile a while and then goes back to her previous mood, this brings about mood swing [18].

Anxiety: Fear of uncertainties such as the disease prognosis, treatment modalities and outcome and impending death may grip the patient so much that she may loss contact with surrounding world. Thus, in this state of mind, the patient may lose ability to think positively and her coping mechanism may be affected if proper care is not taking [18].

Physiological health limitations

According to NHS Choices [19], the following are some of physiological limitations associated with cervical cancer. They include:

Early menopause: The menopause occurs as a result of surgical removal of ovaries in advanced cervical cancer which leads to cessation in production of oestrogen and progesterone hormones. Moreover, the damaged to the ovaries can also occur during radiation treatment. Consequently, leading to the following symptoms:

- Patient no longer have monthly menstrual cycles or menstrual periods become much more irregular
- Hot flushes
- Vaginal dryness
- Loss of sexual drive or desire
- Mood changes
- Night sweats
- Thinning of the bones or Osteoporosis

Narrowing of the vagina: Normally, vagina walls are thrown into rugae which are stretched during child birth or heterosexual intercourse. Cervical cancer often cause the vagina passage to become narrower due to loss of its expansivity, which makes the affected patient to experience pain during heterosexual intercourse (dyspareunia) and unable to achieve vaginal delivery.

Kidney failure: The normal function of kidneys which is to remove waste from the blood through the urine is impaired in the cases of advanced cervical cancer. Here, the cancerous tumour can press against the ureters, blocking the flow of urine out of the kidneys consequently, hydronephrosis which can cause the kidneys to become swollen and stretched and in severe cases makes the kidneys to become scarred which can lead to loss of most or all of the kidneys' functions. This is known as kidney failure and kidney failure can cause a wide range of symptoms, including:

- Tiredness
- Swollen ankles, feet or hands, caused by water retention
- Shortness of breath
- Feeling sick
- Hematuria (blood in urine)

Vaginal discharge: This is uncommon but very distressing which occurs in the cases of advanced cervical cancer, this discharge is characterized by unpleasant-smell and can occur for a number of reasons, such as the breakdown of tissue, the leakage of bladder or bowel contents out of the vagina, or a bacterial infection of the vagina.

Pain: Excruciating Pain is usually associated with cervical cancer when it spreads into nerve endings, bones or muscles. The pain keeps the patient uncomfortable and unable to perform activities of daily living.

Social health limitations

Work: Due to the debilitating effects of cervical cancer, the patient productivity would be reduced and might need quite a lot of time off duty to rest and also seek for medical attention and this, when it becomes burdensome on employer or organization might cost the job of the patient especially in private establishment [19].

Reduced Activities of daily living: Many women with cervical cancer have radical hysterectomy which is a major operation, and it takes about six to twelve weeks for them to recover from it. During this time the patients' needs to avoid most of her activities of daily living such as heavy housework, lifting children, driving and heavy shopping bags. Based on this the woman would need eight to twelve weeks off work after a radical hysterectomy to recover from the stress and strain of the condition [20].

Sexuality: Most women find it difficult to have sex during and after being treated for cervical cancer, because the side effects of some treatments can include vaginal dryness and narrowing of the vagina which contributes to dyspareunia which might lead to loss of intimacy and family instability [19,21].

Implications of Cervical Cancer to Nursing

Nursing implication in this context simply means nursing responsibilities and what you as a registered nurse should be assessing for [22]. The focus is on the nursing responsibilities both in prevention and treatment of cervical cancer.

The Specific Nursing Roles in Prevention of cervical cancer

Awareness creation: According to Megan et al., [23] Nurses as a primary source of health education to their patients and the public has a significant role to play in cervical cancer prevention through cervical cancer education in a varieties of setting as hospital clinic, health centers, women group, churches, schools, in-patients. While creating the awareness, information education and communication (I.E.C.) materials are used to create awareness on risk factors, preventive measures and importance of early identification and treatment.

Vaccination: The nurses starting vaccination campaigns and ensures that all the women of childbearing age who comes into the hospital are vaccinated against Human papiloma virus (especially in countries where vaccination program is implemented) and Vaccination requires 3 visits. Community outreaches can be conducted to expand coverage and to reach the unreachable in order to prevent incidence of cervical cancer. Thus, nurses educates the public on the name of vaccine, the diseases they are preventing (i.e. cervical cancer), when and where to go for the vaccination [24].

Cervical cancer screening: According to American cancer Association [6], study conducted at Sweden shows that nurse-midwives traditionally had strong autonomous role and being the main providers of both antenatal care and contraceptive counselling, they run adolescent clinics and have opportunity to speak with participants and provide them with sufficient information and support and also perform Pap smears as part of their population-based cervical cancer screening

program directed at all women, ages 23–60 years. Therefore, the role of a nurse in cervical cancer screening involves both the provision of care for a population and the provision of sensitive, personal information for the individual participant [25].

The specific nursing roles in treatment of cervical cancer

Assessment: Patient is assessed through history taking and physical examination to obtain the subjective and objective data respectively. The nurse obtains the following history from the patient in order to identify possible predisposing factor such as cigarette smoking, Contraceptives, Sexually transmitted infection (eg. Chlamydia, HIV, HPV etc.), multiple sexual partner, Diethylstilboestrol drug use. Moreover, patient's history of presenting signs and symptoms are obtained as well; foul vaginal discharge that increases after having intercourse, dyspareunia, excruciating Pain, haematuria, spotting, positive Pap smear result and anxious feeling.

Physical examinations includes vital signs (Body Temperature 38.5°C, Pulse rate 72 b/m Respiration, 18 c/m, Blood pressure, 150/70 mmHg), Body weight 52 kg (ideal body weight was 65 kg, which is about 20%weight loss), Examination of the cervix reveals a large necrotic lesion at the 7 o'clock position [24].

Diagnoses: Based on the assessment data, the following diagnoses are made:

- Hyperthermia related to increase in basal metabolic rate evidenced by thermometric reading (38.5°C)
- Hypertension related to emotional disruption (thinking) as evidenced by Sphygmometric reading of 150/70 mmHg
- Chronic pain related to metastases evidenced by patient's verbalization
- Weight loss related to Catabolism evidenced by patient's emaciation and current weight of 52 kg
- Anxiety related to disease outcome evidenced by patients asking too many question
- Impaired skin integrity, risk for related to radiation therapy
- Anticipatory grieve related to potential loss of life

Expected outcome: The following are the expected outcome based on the diagnoses identified above. Therefore, it is expected that the patient should:

- Enjoy and maintain normal body temperature
- Enjoy and maintain normal blood pressure
- Develop strategies for pain control
- Regain the body weight
- Gain some knowledge and become less anxious
- Maintain skin and tissue integrity during radiation treatment
- Express her feelings about cancer and death

Planning: The responsibility of the nurse here is to develop strategies to achieve each expected outcome. This plan of care should be simple, measurable, achievable, and realistic and time bound (SMART) and it has to be documented for continuity.

Implementation: The nurse administers the plan of care in order of priorities as was enlisted in the plan of care above. For instance,

- Expose and tepid sponge the patient to reduce body temperature by convection and conduction
- Administers antipyretic drug as prescribed
- Administer analgesic drug as prescribed
- Inspect skin surfaces daily before and after radiation therapy
- Educate the patient adequately about the treatment options, benefits and their possible side effects

Refers the patient to cancer support group so that she can interact with cancer survivors to rehabilitate the patient.

Evaluation: Here, the patient is been re-assessed by the nurse to determine if the expected outcome were achieved or not and this can be done both concurrently and terminal as the case may be. The nurse checks the patient's ability to:

- Maintained normal body temperature (37.2°C).
- Maintained normal blood pressure (110/60 mmHg)
- Control pain using diversion therapy, relaxation, imagery technique requiring analgesic occasionally
- Use water base lotion to soothe the skin surface and very careful not to remove the skin marking
- Become less anxious and seems more relax and so on

However, if the expected outcome were not met, the nurse therefore, re-plans, implement and evaluate the care respectively [6,26-36].

Conclusion

In conclusion, having seen the various limitations associated with cervical cancer, it is therefore necessary that all hands should be on desk to prevent this dreadful condition through vaccination and Pap smear screening than to experience it. "Prevention they say is better than cure" therefore it is more economical and cost effective to prevent cervical cancer than trying to cure it.

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