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Women's Health: Role of Community Health Nurses to Screen for Cervical Cancer - A Case Report

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Abstract: ***Promoting Women's Health is important to achieve the universal health coverage as it encompasses the physical, reproductive as well as the mental health of women across the entire life from childhood to older age. Gender norms and inequalities affect access to care and outcomes. The unsafe work conditions and gender-based violence worsens the physical and the mental health. Community Health Nurses function in the community preventing the diseases and promoting the health of the individuals and families. As there is a paradigm shift from communicable diseases to non-communicable diseases globally, the need for cost-effective screening tests becomes an important tool in diagnosing the diseases especially in the rural areas of the developing countries like India. The Community Health Nurses are empowered to do the screening tests for cervical cancer like VIA (Visual Inspection under Acetic acid) Vili, and for HPV, especially by motivating the women to undergo the screening tests through health education. This manuscript describes in detail, about the need for empowering Community Health Nurses to motivate the women for cervical cancer screening by providing health education or behaviour change communication, performing screening methods, providing mental health care, referring for specialized clinical care and following them up in the community.***

Keywords: Women's health, Empowering community health Nurses, Screening tests, Health Education

1. Introduction

Every year International Women's Day is celebrated on the 8th of March with a theme, honouring the women's achievements and calling for gender equality, reproductive rights and ending violence against women. Women are important for the families. Women's health directly influences the health of the family and the community at large. The Community Health Nurses are the backbone of women's health services in India who ensure that even the most marginalized receive appropriate care. Their role in Maternal Health and Child Health directly reduces mortality and also improves the overall family well-being. The Community Health Nurses walk alongside of the women through their every stage of life, in preventing the disease and promoting their health, thereby improving the women's health and family well-being, through accessible, continuous health care.

2. Case Scenario

A 59years old, moderately built, woman from a rural area was regular in attending a peripheral clinic for Diabetes Mellitus. She was 20 years post-menopausal and 40 years since last child birth. She was without any signs and symptoms of cervical pathology.

During a Screening camp, she was motivated for cervical cancer screening by the Community Health Nurse who was doing the home visit in the peripheral area. Based on her age and post-menopausal state, Human Papilloma Virus (HPV) screening was recommended for her and she was motivated to do self - sampling using a brush. It was then processed and found to be HPV–DNA low-positive. Hence, she was referred to the base hospital for further investigation. A pap smear was done in the secondary base hospital and it was with High Grade Squamous Intraepithelial Lesion (HSIL) and she was referred to tertiary care for further investigations. A Cone biopsy was done and found to be High Grade Squamous Intraepithelial lesion (Cervical Intraepithelial Neoplasia-CIN-3) with endocervical crypt and gland involvement, ectocervical margin involvement by HSIL and endocervical was free of malignancy and she had under-went Hysterectomy.

She was followed up in the periphery by the Community Health Nurse and her life goes on. A simple screening test has made a greater impact on the life span of a woman. There are many stories resembling the same where a simple test has made greater impact when the client is motivated and if applied at appropriate time.

3. Background

Cervical Cancer is the fourth most common cancer in women globally with around 662S,000 (14.1%) new cases and around 348,874 deaths (7.1%) in 2022. In India cervical cancer ranks the second among women contributing to 127,000 new cases (17.7%) with 79,906 deaths (8.7%) in 2022[4]

The highest rates of cervical cancer incidence and mortality are in low- and middle-income countries which indicates the lack of cervical screening and treatment services, lack of access to HPV vaccination and it mostly depends on the socio-economic determinants. WHO Global strategy defines elimination as reducing the number of new cases annually to 4 or fewer cases per 100,000 women with targets to be achieved by the year 2030 to elimination in the coming decades.

- 90% of girls vaccinated with the HPV vaccine by 15 years of age
- 70% of women screened with a high-performance test by 35 years of age and again by 45 years of age
- 90% of women with cervical pre-cancer or with cancer receive treatment [5]

Human Papilloma Virus (HPV) is the cause of Cervical Neoplasia. Most HPV infections are transient and are eliminated within months by the immune response of the host, a subset of infections persists and some cause squamous intraepithelial lesions (SIL) which are precursors from which most invasive cervical cancer develop [3]

HPV is detected through molecular methods in nearly all cases of cervical intraepithelial neoplasia (CIN) and cervical carcinoma. HPV variants are classified as High risk or Low risk types based on their propensity to induce carcinogenesis. High risk HPV infection is the most important risk factor for development of SIL that can progress to carcinoma. Two High risk HPV viruses, type 16 and 18, account for approximately 70% of cases of SIL and cervical carcinoma. Low risk HPV variants, types 6 and 11 are associated with the development of condylomas of the lower genital tract [3]

The presence of HPV alone is not responsible for the occurrence of cancer, but other factors such as hormonal status, immune deficiency, early age at first intercourse, multiple sexual partners and coinfection with other sexually transmitted agents also play a role in the causation.

The Pap smear is a highly effective screening tool for the detection of SIL and carcinoma which has significantly reduced the incidence of cervical carcinoma. Early detection of SIL is the rationale for the Papanicolaou (Pap) test in which the cells are scraped from the transformation zone and examined microscopically and it remains the most successful cancer screening test.

The U.S Food and Drug Administration has approved testing for HPV DNA in cervical scrapings. This test is highly sensitive but has lower specificity than the pap smear. HPV DNA Screening test is only recommended for women aged 30 or older, as a positive test at this age is more likely to identify an individual with a persistent infection that may lead to cervical neoplasia [3] HPV testing is currently being used in conjunction with the Pap smear.

Invasive cervical cancer most often is seen in women who never had a Pap smear or not screened for many years. The primary treatment for this is Hysterectomy and lymph node dissection. Radiation and chemotherapy are also done if surgery alone is not curative. Mortality is however based on the tumour staging.

Natural History:

NORMAL CERVIX		
About 60% regress 2-3 years	HPV RELATED CHANGES	HPV Infection
About 15 % progress within 3-4 years	LOW-GRADE SIL (CIN – 1)	-
30 – 70 % progress within 10 years	HIGH – GRADE SIL (CIN – II, III)	Risk factors HPV (16,18)
INVASIVE CANCER		

According to WHO, two approaches to screening and treatment are distinguished.

- In the “Screen-and-treat approach”, the decision to treat is based on a positive primary screening test only.
- In the “Screen, triage and treat approach”, the decision to treat is based on a positive primary screening test followed by a positive test with or without histologically confirmed diagnosis [7]

General Population of Women:

WHO suggests using either of the following strategies for cervical cancer prevention among the general population of women.

- HPV DNA detection is a screen-and-treat approach starting at the age of 30 years with regular screening every 5-10 years
- HPV DNA Detection in a screen, triage and treat approach starting at the age of 30 years with regular screening every 5-10 years [7]

Human Papilloma Virus (HPV) Screening:

Human Papilloma Virus (HPV) Screening is a vital component in the early detection and prevention of cervical cancer. Persistent infection with high-risk types particularly 16 and 18 is the primary cause. Regular screening enables to identify the precancerous changes in cervical cells and adopt timely interventions before progressing into cancer.

Objectives of HPV Screening:

- To detect early pre-cancerous lesions
- To reduce incidence and mortality due to cervical cancer among women
- To guide further evaluation and treatment

Criteria for HPV Screening:

Women aged 30-60 years
HPV test alone every 5 years

Types of Tests

- HPV DNA test: detects the presence of high-risk HPV types that can cause cervical including 16 and 18
- HPV mRNA test: detects e6 / e7 mRNA transcripts from high-risk HPV type indicating active viral oncogene expression.

Pathway of HPV Screening:

The pathway to HPV screening involves several steps, depending upon the age, medical history and whether it is a first-time screening or a follow-up for an abnormal result. Women aged 30-60 years are usually eligible for routine cancer screening. The method used for sample collection is Brush/Swab type method.

Instructions For Self- Sampling of HPV:

Instruct the women to wash hands thoroughly. Sample is collected in a squatting position. The sterile self- sampling kit is opened. The swab or brush is inserted into the vagina usually about mid-depth 5-7 cm and rotated gently against the walls for 3 times clockwise and anti-clockwise and the swab is kept inside the vagina for ten counts to collect the cells and withdraw the swab or brush carefully without touching any surface and the brush is preserved inside the tube used for transportation. Seal, label and send the sample to the lab as instructed.

Health Education:
Health Education is concerned with changes in knowledge, feelings and behaviours of people [(1)] and the ultimate aim of Health Education is Positive Behavioural Modification. Behaviour Change Communication (BCC) is an interactive process aimed at changing individual and social behaviour using specific messages and various communication approaches which are linked with services for effective outcomes. Health Education plays a vital role in enhancing awareness and to bring the women from the rural community for screening test using appropriate Audio-Visual aids like Video-shows, Posters, Puppet Shows and Flash cards. The community Health Nurses use these methods to motivate the community people in order to promote their health and bring about positive behavioural changes.

4. Conclusion

Cervical cancer screening is vital for women as a preventive measure as it reduces the cancer risk. Awareness becomes equally important in the prevention and the Community Health Nurses play an inevitable role in the prevention of disease and promotion of health and the need for empowering the nurses becomes mandatory in the provision of women's Health.

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Conflicts of Interest
There are no conflicts of interest.

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