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ORIGINAL ARTICLE

A study on cervical cancer screening in symptomatic women using Pap smear in a tertiary care hospital in rural area of Himachal Pradesh, India

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KEYWORDS

Cervix;
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HSIL

Abstract *Background:* Cervical cancer is the most common cause of death among women in developing countries. India has the highest age standardized incidence in South Asia at 22. An attempt was made to know the impact of cancer screening programmes in place since 1975 in India, and to do cytological screening in symptomatic women.

Material and methods: 200 women in the age group of 21–65 years who attended Gynaecology Outdoor Patient Department (OPD) who consented to participate were screened by Pap smear testing. Women who were pregnant, and known or treated case of cancer cervix were excluded from the study. Pap smears were made with conventional method.

Results: None of the women had Pap smear testing in their life earlier. Only 5% women knew that the tests are available that can detect cervical cancer. All the women were married and in stable marital relationship. Mean age was 38.6 years. Most of the women were parous, had poor socio-economic status and had never used tobacco in any form. Vaginal discharge was the commonest complaint followed by inter-menstrual bleeding. 56% smears were reported as NILM, 32.5% inflammatory, 1.5% had other non-specific findings. ASC-US was in 1%, LSIL in 5.5% and HSIL in 2.5% women. Overall sensitivity and specificity for detection of LSIL were 76.9% and 96.2% and those for detection of HSIL were 66.6% and 97.6%.

Conclusions: Pap smear is highly sensitive and specific method in detecting pre-cancerous lesions of cervix. Community needs to be enlightened about Pap test through diffuse educational activities.

1. Introduction

Cervical cancer is the most common cause of cancer related deaths among women in developing countries. Mortality due to cervical cancer is also an indicator of health inequalities, as 86% of all deaths due to cervical cancer are in developing countries, low- and middle-income countries. Every year in

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India, 122,844 women are diagnosed with cervical cancer and 67,477 die from the disease. India also has the highest age standardized incidence of cervical cancer in South Asia at 22, compared to 19.2 in Bangladesh, 13 in Sri Lanka, and 2.8 in Iran (1).

India has a national programme for cancer since 1975, when the emphasis was on equipping premier cancer institutions. In 2010, cancer control became a part of a more comprehensive, larger programme on non communicable disease called National Programme for Prevention and Control of Cancer (2). In the absence of nationwide screening programme, there are disparities in screening, treatment, and also survival. In the hill state of Himachal Pradesh, cancer cervix is the major public health problem since it ranks as the number one female cancer as per the annual reports of Regional Cancer Centre, Himachal Pradesh, for the last 10 years (2). In this area of Kangra District of Himachal Pradesh, in the last ten years various studies were conducted in community settings to enlighten about Pap smear test, by diffuse educational activities, and screening programme using Visual Inspection using Acetic Acid (VIA) by the authors. Keeping in view the topographical conditions and high incidence of cervical cancer, the present study is an attempt to screen women attending Gynaecology OPD for the cervical cancer using Pap smear and to know whether previous studies in this area made an impact on awareness for cancer screening.

2. Materials and methods

The study was conducted in the Department of Obstetrics and Gynaecology at Dr. Rajendra Prasad Government Medical College Kangra at Tanda, Himachal Pradesh, over one year period with effect from May 2014 to April 2015 after approval from 'Institutional Ethics Committee'. A total of 200 women attending Gynaecology OPD who consented to participate in the study were included.

Inclusion criteria are as follows:

Age > 21 years

Women with vaginal discharge, post coital bleeding, intermenstrual bleeding, post-menopausal bleeding, multiple sexual partners, unhealthy looking cervix, lesion that bleeds on touch, smokers and women without any symptoms were screened.

Exclusion criteria are as follows:

Women not willing to participate in the study
Known case of cancer cervix
Treated cases of cancer cervix
Women who were pregnant were excluded from study

All the women in study were sensitized about the screening method to detect carcinoma of cervix in preclinical stage. The women who volunteered to participate were re-informed about the Pap smear, biopsy if required and the required follow-up in case of an abnormal pap test result with the help of an information sheet that was provided to them and all queries answered by the investigators. Thereafter, informed consent was obtained in a structured Proforma. A detailed history was taken in all the women and that included personal information, history, and clinical examination.

PAP smears were made with the conventional method according to standard medical literature. The participants were prepared in lithotomy position. A sterile bivalve speculum of appropriate size was inserted into the vagina without lubrication and was positioned that allowed complete visualization of the cervical os and ectocervix. First the sample of ectocervix was taken using a wooden spatula (Ayres), and the notched end of the spatula that corresponds to the contour of the cervix was rotated to 360° around the circumference of the cervical os and was immediately smeared over labelled glass slide in rotary manner and was fixed within 30 s before drying in 95% ethyl alcohol in Coplin jar. For endocervical cytology, endocervical brush was inserted into the endocervix until the junctions of the bristles of the brush with the end of handle were in approximation with external os. Then brush was rotated 180^0 (one half turn) in endocervical canal, then rolled on glass slide and fixed immediately in 95% ethyl alcohol and was sent to Department of Pathology for examination.

Cytology laboratory reported the examination results according to the Bethesda III classification system (2001) as follows:

- Adequacy of sample
  - Satisfactory
  - Unsatisfactory
- Squamous cell abnormalities
  - Atypical squamous cells (ASC)
  - ASC of undetermined significance (ASC-US)
  - ASC, cannot rule out high grade lesion (ASC-US)
  - Low-grade squamous intraepithelial lesion (LSIL)
  - High grade squamous intraepithelial lesion (HSIL)
  - Squamous cell carcinoma
- Glandular cell abnormalities
  - Atypical glandular cells, specify site of origin, if possible
  - Atypical glandular cells, favour neoplasia
  - Adenocarcinoma in situ
  - Adenocarcinoma
- Other cancers (e.g., lymphoma, metastasis, sarcoma)

All the women with abnormal results were advised for follow-up and treatment as per the standard guidelines by World Health Organization (WHO)

3. Results

None of the women who participated in the study had Pap smear testing earlier in their life. 10 women (5 per cent) knew that there are tests available that can detect the cancer of the cervix. But none knew about the test that can detect the precancerous lesions.

Socio-demographic characteristics of the participating women are shown in Table 1. Majority of women included in the study were in age group of 31–40 years with mean age of 38.6 years ± 6.29. Out of 200 women 197 (98.5%) were parous and three women (1.5%) were nulliparous. All women were married and were in monogamous relationship. 108 women (54%) had never been to school or had primary education only. 76 (38%) were not using any form of family planning methods. Most of the women were of low socioeconomic strata and none of them gave history of smoking or tobacco use in any form.

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