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## Level and determinants of precancerous symptoms of cervical cancer in unscreened population of Uttar Pradesh and Rajasthan, India: A pilot study



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#### ARTICLE INFO

Article history: Received 4 November 2016 Accepted 22 December 2016 Available online 11 January 2017

Keywords: Cervical cancer Human papillomavirus (HPV) Cancer epidemiology Screening Women's health/gynecology

#### ABSTRACT

*Problem considered:* Cervical cancer, mainly caused by human papillomavirus infection, is one of the most frequent cancers in women in the developing world including India. The present study attempts to explore the risk factors related to symptoms of cervical cancer. *Materials and methods:* A total of 1319 females of age groups ranging from 14 years to 85 years were included in the present study and analyzed for symptoms and risk factors for cervical cancer.

Results: The prevalence of painful micturition, white discharge per vagina, and pelvic pain in the age group 25–44 years was found to be 22.1%, 21%, and 8%, respectively, and the distribution of symptoms was statistically associated (p < 0.05) with age. Chances of developing painful micturition were significantly related to age group 45–54 years (AOR = 2.5; 95% C.I.: 1.4–4.5), while the likelihood of developing pelvic pain was significantly related to the females of age groups of below 25 years (AOR = 8.4; 95% C.I.: 1.4–12.1) and 25–34 years (AOR = 7.9; 95% C.I.: 1.7–8.3). Pelvic pain was also independently related to the abnormal age of menarche ( $\leq$ 11 or  $\geq$ 16 years) (AOR = 3.6; 95% C.I.: 1.6–8.5) concerning the standard age of start.

*Conclusions*: Findings of the study indicate that there is lack of awareness about the key risk factors for cervical cancer among women that pointed out the issue of limited knowledge which may work as an obstacle in health services utilization.

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#### 1. Introduction

With 0.49 million new cases, cervical cancer is seventh leading cancer overall and ranked fourth in women throughout the

globe and is responsible for more than 0.24 million deaths per year in 2013.<sup>1</sup> Approximately 90% of cases, as well as deaths from cervical cancer, occurred in developing countries.<sup>2</sup> It is ranked as the third most common cancer overall, and the second most common cancer in the female population in India

http://dx.doi.org/10.1016/j.cegh.2016.12.006

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causing approximately 0.12 million new cases and 68,000 deaths per year.  $^{1}$ 

The cervical cancer is much more prevalent among women of low socio-economic status as well as among rural women in India.<sup>3</sup> The estimated age-standardized cervical cancer incidence and mortality rates were reported to be 30.7 and 17.8 per 100,000 women respectively, and peak incidence was observed among older women.<sup>4</sup> Ganjewala,<sup>5</sup> indicated that the cervical cancer alone represents 34% out of all carcinoma prevalence in some parts of Uttar Pradesh and Madhya Pradesh. The national cancer registry program (NCRP) reported highest incidence of cervical cancer in Uttar Pradesh in 2009 with a total of 17,367 cases that increased to 18,692 in 2012.<sup>6</sup> Numerous epidemiological studies in present and past have significantly contributed to understanding about cancerassociated symptoms and risk factors.<sup>5</sup>

It is a well-known fact that persistent infection with human papilloma virus (HPV) of specific high-risk types is the significant cause of development of almost all types of cervical cancers and their precancerous lesions.<sup>7</sup> The infection also being precipitated by other exogenous or endogenous cofactors, which includes but not limited to sexual habits, reproductive history, other sexually transmitted diseases, smoking, nutritional deficiencies and genetic susceptibility, acting in conjunction with HPV may be necessary for the disease progression.<sup>8,9</sup>

It has been established that different socio-demographic and reproductive factors can influence the participation in screening programs related to cervix cancer. Some of them are the age of individual, education, marital status, income, a number of children alive, present use of contraception, region, lack of awareness about cervical cancer screening and its prevention, personal and lifestyle factors, etc.<sup>10</sup>

A hospital based study showed that the risk factors which lead to developing cervical cancer includes multiparty, long-term use of oral contraceptives, use of copper-T for continuously more than 5 years, sexually transmitted diseases, HIV infection, smoking/tobacco chewing, genital warts, poor hygienic conditions, reproductive tract infections and low intake of fruits and vegetables due to low socio-economic status.<sup>11</sup> The common symptoms included hemorrhage, leucorrhoea, cachexia and pain (knee, leg and back) and other symptoms might be painful and frequent micturition, incontinence of urine, painful defecation and pruritus because of vaginal discharge.<sup>6</sup> There was no conclusive evidence that suggests association of use of oral contraceptives with cervical cancer.<sup>12</sup> According to some reports, the age of women is not a prognostic factor in carcinoma of the cervix.<sup>13</sup> Other authors have noted decreased survival in women younger than 35 or 40 years, who have a greater frequency of poorly differentiated tumors.<sup>14</sup> It was also reported that early age at first intercourse, history of multiple sexual partners, and a higher number of pregnancies are risk factors.<sup>6</sup>

Cervical cancer prevention programs have failed to meet their objectives due to logistical, financial, and social problems.<sup>15</sup> Major barriers to screening uptake include lack of awareness about the disease, lack of attitude toward the concept of prevention, the geographical and economic inaccessibility to health care, the poor quality of health care delivery services and a lack of support from family members including husband.  $^{\rm 16}$ 

#### 2. Materials and methods

#### 2.1. Study samples

The purpose of screening camps was to spread awareness regarding the risk factors and symptoms related to the gynecological cancer among females of unscreened population of western parts of Uttar Pradesh and eastern Rajasthan. The main reason behind selecting these areas was the higher number of reported patients with cervical cancer from the region.<sup>5</sup> Before the screening camps, a small one-to-one interaction was done at the selected places to make sure the maximum availability of females to approach camps on the specified dates. The participants were the individual females of all age group who came to screening camp voluntarily on day of survey. No specific criterion was set for the selection of females to the screening. However, the females with any serious illness and those who had not given consent were excluded from the screening program. A pilot study was also conducted to pretest the questionnaire in selected study areas of western Uttar Pradesh prior to carrying out the screening camps. The results of the pre-testing provided useful information helpful in improving the clarity of questions for finalization of the questionnaire. The internal consistency of the questionnaire was estimated to be 78% using Cronbach's alpha that indicated a good level of reliability.

#### 2.2. Data collection

A total of 26 screening camps were organized at different places in western Uttar Pradesh and eastern Rajasthan during period of April 2015 to June 2015. A pretested, designed, and self-administrable questionnaire was used to collect the information from participants regarding risk factors and symptoms of cervical cancer. The study participants were interviewed by trained health workers who were sensitized and trained in basic cancer screening under supervision of qualified medical graduates and randomly cross checked by medical doctors. Data of 1319 females of all age groups ranging from 14 years to 85 years were analyzed for symptoms and risk factors for cervical cancer. The study variables included age, marital status, age at marriage, age at menarche, age at menopause, age at first childbirth, abortion, oral contraceptive pill (OCP) consumption, ovulation induction, hormone replacement, any breastfeeding, painful micturition, vaginal bleeding, rectal bleeding, vaginal discharge and regarding pain.

#### 2.3. Statistical analysis

All scale variables were presented as mean  $\pm$  SD and categorical with respective proportions. Data of risk factors namely current age, age at marriage, age at menarche and age at menopause, etc. were analyzed to quantify the magnitude of association with the prevalence of common symptoms of Download English Version:

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