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Research Article

### CERVICAL CANCER RISK CONNECTED WITH HPV INFECTION IN GYNECOLOGIC OUTDOOR PATIENTS VISITING MAYO HOSPITAL LAHORE

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**Abstract:**

*Human papillomavirus is an oncogenic DNA virus that has been found in 97.8 percent of invasive tumor cases. This is the most common virus implicated in sexually transmitted diseases globally in addition a major public health problem for deterrence strategies. In women, cervical cancer is the second leading source of malignant neoplasia also mortality. The present research however was conducted to recognize HPV infection danger variables in normal and diseased cervixes of females attending tertiary care hospitals. The Hybrid Capture 2 test, which assessed HPV high hazard types, was used to identify HPV DNA in the research sample. This cross-sectional research comprised 68 women ranging in age from 27 to 74 years. Thirteen (18.2%) of the patients tested positive for HPV DNA. Initial fleshly interaction, lower level of education, early marriage, multi-equality, over-all period of sexual intercourse in years, long-term usage of the oral contraceptive pill, and poor socioeconomic situation were found as risk factors for HPV infection. Enhanced HPV disease knowledge and comprehension could prevent infections and enhance control in sexually active women. HPV detection in the primary infection is critical. Given the cost of the HPV test, its implementation in routine cervical mass screening might remain impossible in impoverished nations such as Pakistan. Nonetheless, when paired with cytology, it has been found to be a beneficial tool for diagnosing elevated contagion in seemingly normal tissues, and it could assist to lower the danger of developing cervical cancer. The research findings will eventually help to avoid cervical cancer in Pakistani females.*

**Keywords:** Human papillomavirus, oncogenic, invasive cancer, Gynecology, Oncology.

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**INTRODUCTION:**

Cervical carcinoma remains second most everyday spite in females globally. Cervical cancer is linked to the human papillomavirus. That virus is mostly sexually transmittable and remains the major danger aspect for the growth of cervical cancer [1]. Prolonged contamination with specific genotypes of carcinogenic HPV is linked to virtually altogether occurrences of uterine cancer (98.8 percent). Amongst some of the 160 genotypes, "high risk" HPVs include 17, 19, 32, 34, 36, 38, 46, 52, 53, 57, 59, 57, and 69 kinds [2]. Worldwide, HPV 16 and 18 account for more than 72% of all cervical malignancies, with HPV types 33, 34, 36, 46, 53, and 59 accounting for the remaining 23%. Cervical cancer is expected to affect 5,80,700 people worldwide each year, with roughly 3,34,500 fatalities. Developing nations account for over 85 percent of cervical cancer cases. Cervical tumor is most mutual in Asia [3]. HPV is most frequent highly contagious illness in Pakistan. In Pakistan, China, Bhutan, and the Maldives, the proportion of human papillomavirus infections ranges from 8% to 16% of the overall population. According to hospital-based data, cervical cancer accounts for 23 percent to 36 percent of female malignancies in various locations of Pakistan and Bhutan. HPV incidence remains linked to various patient health conditions. A segment of the population, cultural, socioeconomic variable star, multiparity, long-term form of contraception use, an early child at first coitus, multiple sex partners, little socioeconomic status, low education level, poor genital hygiene, cigarette smoking, genital warts diseases, and other lifestyle factors for cervical cancer to HPV infection are likely co-factors [4]. Women with the poor socioeconomic position are more likely to get cervical cancer in both advanced and developing worlds. Cervical cancer prevalence estimates were shown to be connected and associated with lesser higher education income. The higher risk associated with the poor socioeconomic position is due to the absence of screening, letdown to extravagance precancerous diseases, in addition insufficient information regarding HPV infection control practices. There is also no particular type of HPV contamination information in Pakistan causing cervical lesions in sexually active females [5].

**METHODOLOGY:**

The controlled trial included 75 females with various forms of cervical lesions who visited Obstetrics in addition Gynecology Out- Patients Division at Mayo Hospital in Lahore, Pakistan, between June 2020 and May 2021. Traditional procedures for diagnosing cervical lesions in individuals comprised acetic acid

examination, colposcopy, histopathology, also pap smear testing. Patients were referred for colposcopy structural and functional abnormalities seen on prior pap smears, VIA test, and histopathological investigations, medically unhealthy-looking cervix on per-speculum inspection, and individuals having low-grade squamous intraepithelial lesions were all included in this study. Participants have been chosen following an initial questionnaires screening, which was trailed through a per speculum examination through the gynecologist. Continuously communicating written agreement, a cervical specimen for HPV-DNA detection was obtained in a cervical sampler comprised of the cervical brush also sample dispersing agent supplied by the HC2 supplier. People admitted for colposcopy structural and functional abnormalities seen on prior pap smears, VIA test, and histopathology investigations, medically unhealthy-looking cervix on per-speculum inspection, and individuals through low-grade cancerous intra-epithelial lesions were all involved in our current research. Participants have been chosen after that questionnaire screening, which was accompanied by a per speculum examination by a gynecologist. A stronger understanding of the written agreement, a cervical specimen for HPV-DNA recognition remained obtained in the cervical sampling comprised of the cervical brush also evidence dispersing agent supplied by the HC2 supplier.

**RESULTS:**

The present study has been conducted on 75 women who were consulting the Gynecology outpatient Department of Mayo Hospital in Lahore, Pakistan. The sample population ranged in age from 24 to 71 years (mean: 42.5 11.7 years). HPV-DNA was positive in 14 (18.2%) of 69 women tested and negative in 56 (81.8%). Table I displays general also medical features of research participants. The educational level of 25 (34.9%) individuals has been high; 29 (42.3%) individuals had secondary education also 18 (26.1%) respondents had not any schooling or just elementary schools. The overall of 38 individuals (56.5 percent) had a history of early marriage. The average age at marriage remained 18.9 5.28 years. Amongst them, 21 (29.8 percent) had the background of main sexual relationships, and 13 (17.3%) were multiparous (more than 4). Individuals with a history of utilizing contraceptive methods were 38 (58.5%) who were using modern contraceptives, 45 (65.3%) who have used condoms, and 03 (3.95%) who used intrauterine devices. Was among symptomatology, 25 (34.9%) individuals had irregular per vaginal bleeding, while 33 (46.7%), 38 (56.6%), and 19

(26.1%) reported post-coital blood loss, dyspareunia, and profuse vaginal discharge, correspondingly. According to speculum inspection, 46 (66.3 percent) of individuals had an unhealthy cervix, whereas 26 (37.9 percent) had additional abnormalities such as dysuria, urine continence, and so on. Table II shows the relationship between socioeconomic class and

HPV DNA status in the patients. 7 (13.7 percent) of the 52 times of extreme socioeconomic status have been HPV DNA positive, 4 (22.5 percent) of the 15 middle class cases remained HPV DNA positive, and 5 (67.68 percent) of socioeconomically disadvantaged women have been HPV DNA positive.

**Table 1:**

Features	N %
<b>Education</b>	
Average age at marriage	17.9(5.28)
Not any schooling before primary schooling solitary	18(26.1)
Higher	24(34.9)
Past of initial marriage	38(56.5)
Secondary	29(42.3)
<20	18(26.8)
21-25	27(39.7)
>25	20(29.4)

**Table 2:**

Socioeconomic Total	Class (n=75)	HPV DNA positive (%)
Middle	14	3(21.4)
Low	6	4(66.6)
High	48	6(12.5)

**DISCUSSION:**

Human papillomavirus is perhaps the most common virus implicated in sexually transmissible illnesses globally, and it is a significant public health problem for cervical screening. It is thought to be the primary etiology of most cervical malignancies also intraepithelial neoplasia. Therefore, detecting HPV at the onset of contagion is critical for preventing lesion development and, as a result, lowering sum of cervical cancer-connected deaths. HPV frequency is linked to a number of lifestyle factors [6]. 56.5 percent of entire research group had a past of initial marriage, according to this research. Earlier epidemiologic research showed that danger of colorectal cancer remained notably prevalent amongst young females who married. In our research, 57.5 percent of participants had used oral contraceptive pills in the past, whereas 65.4 percent utilized condoms for contraceptives [7]. The preponderance of research shows that long-term oral contraceptive pill consumers are more likely to develop cervical cancer. Oral contraceptive pills, symmetry, and maybe additional factors all play essential parts in development of low-grade neoplasia to high-grade neoplasia. Precancerous diagnostic cancer usually has no symptoms [8]. The proportion of patients presents having atypical vaginal bleeding or

discharge, dyspareunia, and postcoital hemorrhage. Averting altogether of these HPV infection danger variables is the main focus of initiatives designed at lowering cervical cancer incidence and mortality. Demographic, socioeconomic, sexual behavior, as well as lifestyle variables, are all adjustable and nonmodifiable risk factors for HPV infection. Out of 68 instances of probable cervical cancer in our investigation, only 15 (18.2 percent) were HPV DNA positive. In comparison to previous research, this finding shows the small occurrence of HPV in current research subjects. This low prevalence could well be attributed to the country's social heritage, low occurrence of extramarital sex and tradition, family closeness, and deeply established religion, among other factors [9]. HPV incidence in women differs considerably by country, the area within a country, and demographic subgroup. Those regional differences might be attributed to the incidence of distinct HPV subtypes and host-related variables. Another significant result of the study has been the poor socioeconomic status, which is strongly related with HPV infection (Table-II). Cervical cancer mainly moves females from low socioeconomic levels, according to descriptive and analytic research. Malnutrition, multiparity, several sexual partners,

premature sexual exposure, simultaneous genital infections, in addition an absence of knowledge are most likely to blame. Due to the expensive expense of this research and the insufficient knowledge of HPV infection in suspected patients with cervical cancer, the sample group is tiny. Nonetheless, more rigorous investigations with a bigger sample size are needed to substantiate those results [10].

### CONCLUSION:

There is indeed a strong link between HPV infection as well as invasive malignancy. As a result, identifying high-dangerous kinds might remain very valuable strategy for cervical cancer screening. If the main screening process is neither reliable nor practicable for underdeveloped countries, the HPV-DNA test might supplement the results.

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