

Histopathological Features of Cervical Cancer in a Central Diagnostic Facility Center in Lahore

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ABSTRACT

Background: Cervical cancer remains one of the single commonest gynecological malignancy amongst women in developing countries and subsequent after breast cancer through all age sets. Nevertheless a preventable disease, the death rate is very high because it is an unheeded condition in Pakistan in terms of awareness, screening, follow ups of high risk patients and most importantly, vaccination.

Aim: To highlight the clinico pathological profile of cervical carcinoma in the cervical biopsies and hysterectomy specimens.

Study design: This retrospective surveillance was conducted at a communal Public sector diagnostic and management facility center located in Lahore, Pakistan.

Methods: This was a retrospective study to determine the histopathological characteristics of carcinoma of the uteri cervix diagnosed in our center over a 2-year period. 1450 cervical specimen were gathered at the hospital during a two year stretch period covering November, 2018 to October, 2020. Histological diagnosis were confirmed by qualified fellows of histopathology department, including the author.

Results: Out of 1450 cervical histological findings, 28 were cervical carcinomas. Squamous cell carcinoma was the commonest histological sub-type with 62% being moderately differentiated. Commonest age range was 50-70 years. Commonest Clinical presentation included, post-menopausal bleeding per vagina, post-coital bleeding

Conclusion: The findings submit that cervical carcinoma is still an unveiled, yet diagnostically critical among women visiting our hospital to seek medical attention for various conditions of the uterine cervix with squamous cell carcinoma being the most prevalent histological type. Policies that encourage the implementation, monitoring and evaluation, screening and vaccination have to be considered to reduce the affliction of cervical cancer

Keywords: Cervix, Cervical Cancer, Squamous cell carcinoma, HPV, Pakistan.

INTRODUCTION

The cervix is a vital reproductive organ and is subjected to many non-neoplastic and neoplastic conditions. Pathologies of the uterus and cervix comprise majority of patient visits to gynecologists¹. In an emergent country like Pakistan, the inaccessibility of consistent facts and figures on disease prevalence is a barrier to platform development and evaluation that are required for prevention and control of cancer. The country is flawed by problems as undernourishment and endemic communicable diseases, which are major causes of morbidity and mortality in the region². Latest evaluations indicate that each year 5601 women are diagnosed with cervical carcinoma and 3861 pass on from the illness. Cervical carcinoma positions third most frequent cancer amongst Pakistani women and ranks second most common carcinoma among females between 15 and 44 years of age. About 0.5% of females within the overall population are projected to harbor cervical HPV-16/18 infection at a given time, and 88.1% of cervical carcinomas are attributed to HPVs 16 or 18³. It's the fourth commonest cancer in woman kind worldwide claiming around 250,000 losses annually, to add, 85% of the mortality contributed by low and middle-income countries (International Agency for Research on Cancer, 2017)⁴. The incidence and mortality rates of cancer of the

cervix uteri are high in Africa and a few parts of Asia, and are low in Australasia and West Asia (Ferlay et al., 2015). Cervical carcinoma may be a killing and growing cancer among Pakistani women⁵. About 500,000 women are diagnosed with cervical cancer per year globally⁶. Slaying 273000 females. Most affected women of cervical carcinoma are from underdeveloped countries⁷. The exact incidence and prevalence of carcinoma cervix isn't recognized in Pakistan because it's an underrated illness in terms of screening, awareness and prevention. Inconsistent epidemiological statistics are available in divergent studies due to modest studies, limited population data, moreover handling only registered cases⁸. Many studies stated that carcinoma cervix is included among the primary ten commonest cancers⁹. In 2002, the prevalence of cervical carcinoma in Pakistani women was 0.009% (9/100,000) which in 2008 was 0.019% (19.5/100,000), consistent with advanced research by the World Health Organization (WHO)¹⁰. Estimated half-a-million females are feared to die due to cervical cancer by 2030, according to WHO, about 98% of those deaths are estimated to occur in underdeveloped countries like Pakistan¹¹. The aim of this study wasn't to draw any conclusions from the outcomes, but to illuminate a recent preview of the disease in a low-income country, where inadequacy of basic figures has caused difficulty in scheming projects for prevention and early diagnosis of disease. At the Shaukat Khanum Memorial Cancer Hospital and Research Center (SKMCH

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& RC) situated in Lahore, Pakistan, carcinoma of the uterine cervix ranked fourth most common malignant neoplasm, following carcinoma of breast, ovary, and oropharynx, among female patients registered at the hospital (1994 – 2005) (<http://www.shaukatkhanum.org.pk>)². Epidemiological studies administered within the last 30 years have consistently pointed that risk of cervical carcinoma is directly associated with the practices of sexual activity: number of sexual partners, age at initial sexual activity, and sexual behavior of the women's male partners. Genital tract infection with certain strains of human papillomavirus (HPV) is the most important risk factor for carcinoma of cervix. The virile sexual partner is meant to be the route of the infection¹². Women's level of awareness, drive for screening, and psychosocial factors determine her health-seeking manners¹³.

MATERIAL AND METHODS

This retrospective study was conducted for a period of two years (November 2018-October 2020) in the department of Histopathology of Fatimah Jinnah Medical University Lahore, which is tertiary care center in central Punjab. All biopsies from cervix, including cervixes of hysterectomy specimens with all uterine and cervical indications, regardless of route and nature of surgery were included in the research. Clinical details and relevant history of the patients, were obtained from the request forms. Specimens received were immediately transferred into 10% fresh formalin and after fixation, the specimen were examined grossly and necessary sections were obtained from cervix (ectocervix and endocervix). Paraffin sections and slides from the blocks were stained with H & E. The slides were then reviewed microscopically in detail. The histopathological findings of cervix were noted and these findings were then correlated with clinical diagnosis.

Data analysis: Data was recorded on proforma sheets. Analysis was done and percentages were calculated.

RESULTS

A total of 1450 cases were analyzed for morphological diagnosis of cervical carcinoma, age and symptoms. Out of them, 28 were diagnosed as cervical carcinoma. 26 reported as squamous cell carcinoma, 2 signed out as adenocarcinoma. Majority (62%) carcinomas were moderately differentiated (Table 1).

Table 1; Histological Type and grading of Cervical Cancer

Parameters of study	Frequency(n)	Percent (%)
Histological Type		
Squamous cell Carcinoma	26	93
Adenocarcinoma	2	7
Grade		
oderately (II)	18	62
Well (I)	7	27
Poorly (III)	3	11

Patients were in the age range 50 to 70. (Table 2). Commonest clinical presentation was postmenopausal bleeding (64%) (Table 3).

Table 2: Age distribution of patients with cervical cancer

Age Range	Frequency(n)	Percent(%)
<30	1	3.5
31-39	1	3.5
40-49	2	7
50-59	9	32
60-69	9	32
70 and above	6	21

Table 3: Various Clinical presentations of Cervical Carcinoma

Clinical presentation	Percentage (%)
Per Vaginal Discharge	12
Postmenopausal Bleeding	64
Post coital bleeding	2
Pain lower abdomen	22

DISCUSSION

According to our hospital data, 28 cases of carcinoma cervix were documented in two year period and majority were squamous cell carcinomas. The finding that squamous cell carcinoma is the predominant histological type is analogous to the studies in both the low- and high-income countries, local and also international studies¹⁴⁻¹⁸. moderately differentiated squamous cell carcinoma (grade II) was the foremost common histological variant of cervical carcinoma based on tumor grade, followed by well differentiated (grade I) then poorly differentiated (grade 3)¹⁹⁻²¹. The mean age of our study was 58 years. This is often somewhat similar to study done in Karachi²², some middle-income country like Tunisia²³ and that of Nartey et al²⁴ but studies from Zaria, Nigeria Hawassa, Ethiopia²⁵ reported lower mean age. This data is additionally in contrast with the study of Sadeghi SB²⁶, where mean age range is 35 -44 years, likely due to younger age at first intercourse and multiple sexual partners. The present study shows that vaginal discharge, in the form of abnormal vaginal bleeding, postmenopausal bleeding, were among the common presentations, as per text books and as documented by the local studies from Mukhtar R²⁷, and Aziz N¹⁶. To reinforce this debate, study on 72,613 patients administered in England unveiled a high ratio of South Asian females, recorded as "never screened". Limitations in screening included poor knowledge about cancer, lack of info on preventive health care, inaccessibility to economic and geographic services, reluctant nature of girls and lack of encouragement from family and society. Approximately 70.1% of Pakistani females were unaware of tangible location of cervical cancer in body²⁸.

CONCLUSION

The rising trends of cervical cancer, its diagnosis at advanced stage, increased expense of treatment with poor survival rate and lack of knowledge about screening have amplified the burden of cervical carcinoma. Although the incidence of cervical cancer in Pakistan is lower than many western countries, yet mortality rate is high owing to lack of awareness, unapproachability of Pap smear cytology, absence of follow-up and late presentation of cervical

carcinoma. To conclude, the current study proposed that the health measures regarding screening for cervical

cancer need to be started at an age, as early as 25 years. Screening for cervical cancer should be included in the National Health Programme. Per vaginal bleeding and/ or discharge, regardless of age should never be neglected as it can be presenting symptom of cervical carcinoma. A vaccine against HPV has now been approved and officially ratified by the US Food and Drug Administration (2006), and there is faith, that this will be an essential constituent of policies to stop further rise of cervical cancer.

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