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## Original Research

### Histopathological Assessment of Cervix Cancer

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#### ABSTRACT:

**Background:** Cervical cancer is the third most common cancer among women worldwide. The present study was conducted with aim of histopathological assessment of lesions of cervix cancer. **Material & Methods:** The present study was conducted on 108 women with history of cervical cancer. The samples were collected using Ayre's spatula and smears were prepared with the help of endocervical brush. The smears were then fixed in alcohol and stained using the Papanicolaou's technique. **Results:** Maximum cases were seen in age group 40-50 years (34) followed by 30-40 years (23) and 50-60 years (20). The difference was non-significant ( $P > 0.05$ ). The most common histological variant was moderately differentiated squamous cell carcinoma seen in 32, followed by well differentiated squamous cell carcinoma in 25, poorly differentiated squamous cell carcinoma in 10. The common clinical findings was bleeding per vaginal in 78, pain abdomen in 24, growth in 10 and itching/ white discharge in 38 cases. **Conclusion:** Cervical cancer is one of the leading cause of death in women. Histopathological analysis is the confirmatory test.

**Key words:** Cervical cancer, Histopathological, Women

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#### INTRODUCTION

Cervical cancer is the third most common cancer among women worldwide, with 85% of its global burden occurring in less-developed countries. Although incidence rates of cervical cancer have declined in recent years, high rates persist in the United States (US). The number of cervical cancer cases is expected to increase 46% by 2030 with global population growth and aging.<sup>1</sup>

Histopathology and cytopathology form the scientific and clinical basis for current prevention and treatment of cervical cancer. Histopathology determines treatment of cancer and precancer through classifying into a diagnosis the patterns of microscopic organization of cells in tissue sections from biopsy or surgical specimens. Histopathology also remains important as the most widely used clinical endpoints by which the performance of new techniques for cervical cancer prevention is currently evaluated.<sup>2</sup> Infection with some types of HPV is the greatest risk factor for cervical cancer, followed by smoking, infection is also a risk factor. Not all of the causes of cervical cancer are known, however, and several other contributing factors have been implicated. Early

on, typically no symptoms are seen. Later symptoms may include abnormal vaginal bleeding, pelvic pain, or pain during sexual intercourse. While bleeding after sex may not be serious, it may also indicate the presence of cervical cancer.<sup>3</sup> Effective prevention and control efforts is needed; however, they should be based on accurate estimations of cervical cancer incidence and histopathology and should consider local screening behaviors. The present study was conducted with aim of histopathological assessment of lesions of cervix cancer.

#### MATERIAL & METHODS

The present study was conducted in the department of I pathology. It comprised of 108 women with history of cervical cancer. All were informed regarding the study. Ethical clearance was obtained from institutional ethical committee. The samples were collected using Ayre's spatula and smears were prepared with the help of endocervical brush. The smears were then fixed in alcohol and stained using the Papanicolaou's technique. Results thus obtained were subjected to statistical analysis. P value  $< 0.05$  was considered significant.

**RESULTS**

**Graph I Age wise distribution of patients**

Age group (years)	Number	P value
20-30	19	0.51
30-40	23	
40-50	34	
50-60	20	
>60	12	
<b>Total</b>	<b>108</b>	

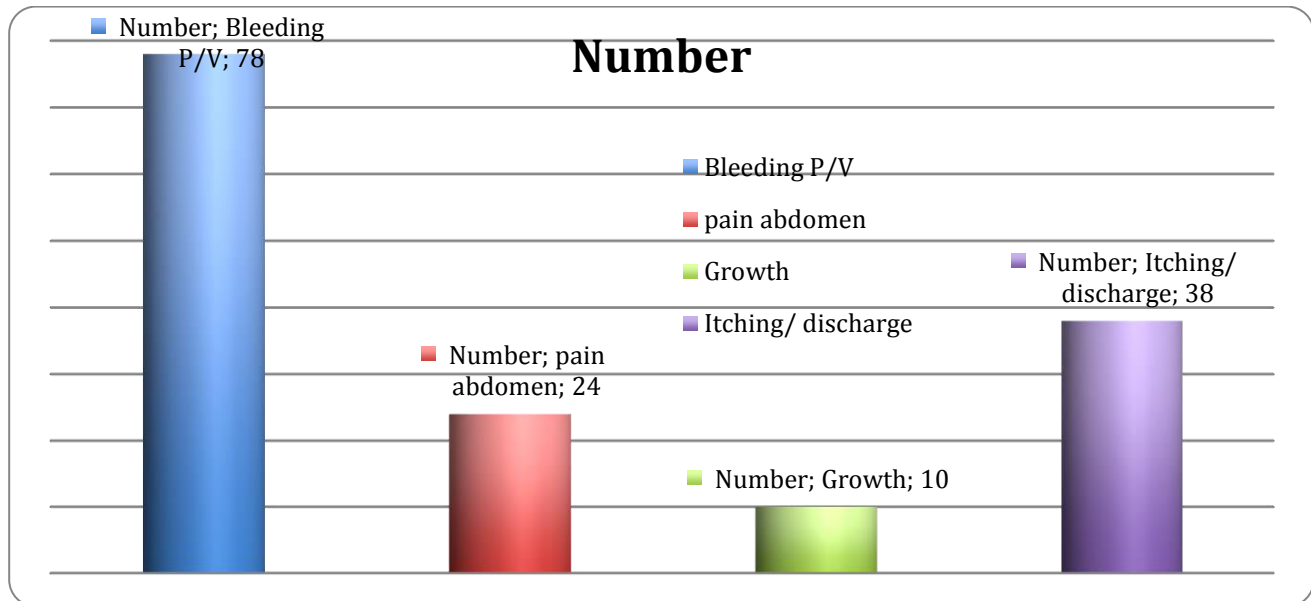
Table I shows that maximum cases were seen in age group 40-50 years (34) followed by 30-40 years (23) and 50-60 years (20). The difference was non- significant (P> 0.05).

**Table II Histopathological variants of Cancer**

Age group (years)	Number	P value
Well differentiated squamous cell carcinoma	25	0.01
Mod. differentiated squamous cell carcinoma	32	
Poorly differentiated squamous cell carcinoma	10	
Squamo- transitional cell carcinoma	8	
Squamo- papillary cell carcinoma	6	
Adenoid cystic carcinoma	4	
Adenocarcinoma	5	

Table II shows that most common histological variant was moderately differentiated squamous cell carcinoma seen in 32, followed by well differentiated squamous cell carcinoma in 25, poorly differentiated squamous cell carcinoma in 10. The difference was significant (P< 0.05).

**Graph I Clinical features in patients**



Graph I shows that common clinical findings was bleeding per vaginal in 78, pain abdomen in 24, growth in 10 and itching/ white discharge in 38 cases.

## DISCUSSION

Cervical cancer risk is highest in middle- and older-aged women combined with the expected increase in life expectancy, the number of cervical cancer cases will rise substantially as populations become older, even if population size remains constant. In developing countries cervical cancer cases are projected to increase 62%, compared to only 8% in more-developed countries by 2030.<sup>4</sup> Demographic changes, including population growth and aging, will make the largest contribution to the rising cervical cancer burden. With 20% global population growth, from 6.9 billion in 2010 to 8.3 billion in 2030, the cervical cancer cases are expected to increase, even when age specific cervical cancer rates are stable or declining. In addition, middle- and old aged populations will increase 45%, from 2.1 in 2010 to 3.0 billion in 2030, comprising one-third of the world's population.<sup>5</sup> The present study was conducted with aim of histopathological assessment of lesions of cervix cancer.

In this study, maximum cases were seen in age group 40-50 years (34) followed by 30-40 years (23) and 50-60 years (20). Sarma et al<sup>6</sup> found that totally 795 cervical biopsies were received, amongst which 618 biopsies were chronic cervicitis, 95 showed varying degrees of dysplasia and 82 cases were malignancies. The commonest age group in the malignant cases (18 years to 80 years) was 4th and 5th decade with history of bleeding per vagina being the commonest clinical presentation. Squamous cell carcinoma was the commonest variant.

We found that most common histological variant was moderately differentiated squamous cell carcinoma seen in 32, followed by well differentiated squamous cell carcinoma in 25, poorly differentiated squamous cell carcinoma in 10. Yang et al<sup>7</sup> found a total of 2028 cases. 49 (2.41%) cases revealed epithelial abnormalities. The most frequent epithelial cell abnormality was low grade squamous intra epithelial Lesion (32 cases, 1.58%).

Nearly half of the patients presented with a normal looking cervix. Epithelial abnormality was more prevalent in post-menopausal age group. We found that common clinical findings was bleeding per vaginal in 78, pain abdomen in 24, growth in 10 and itching/ white discharge in 38 cases. Similar findings were seen in study by Cost.<sup>8</sup> Human papillomavirus (HPV) infection appears to be involved in the development of more than 90% of cases; most people who have had HPV infections, however, do not develop cervical cancer. Other risk factors include smoking, a weak immune system, birth control pills, starting sex at a young age, and having many sexual partners, but these are less important.<sup>9</sup> The major types of oncogenic HPV are found in all grades of lesions, with HPV 16 predominating. Importantly, the distribution of HPV

types changes progressively from low-grade to invasive cancer with HPV 16 and 18 being the two types which increase in frequency from low-grade to high grade lesions (2.0 and 1.5 times respectively). There is a decrease in frequency with other oncogenic types ranging from slight (0.85) for HPV 45 to 0.1 for HPV 53. In addition a single cervix may contain multiple lesions which may be of different HPV types. There is a decrease in frequency of multiple type infections from up to 50% in low-grade lesions to about 4% in invasive cancer.<sup>10</sup>

## CONCLUSION

Cervix cancer in women is among various cancer that is showing significantly increase in number. Histopathological analysis is the confirmatory test.

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