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ORIGINAL RESEARCH 1

Histopathological evaluation of cervix cancer

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Abstract

Background: Histopathology and cytopathology form the scientific and clinical basis for current prevention and treatment of cervical cancer. The present study was histopathological assessment of lesions of cervix cancer.

Materials & Methods:This cross sectional study was conducted by taking 102 women with history of cervical cancer during the period of January-2022 toAugust-2022 in the dept of pathology BBMCH Balangir. Sampling technique was convineance sampling. The samples were collected using Ayer'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: Age group 20-30 years had 20%, 30-40 years had 24%, 40-50 years had 35%, 50-60 years had 11% and >60 years had 10% cases. The difference was non- significant (P> 0.05). The most common histological variant was moderately differentiated squamous cell carcinoma seen in 34%, followed by well differentiated squamous cell carcinoma in 26%, poorly differentiated squamous cell carcinoma and adenoid cystic carcinoma in 12% each. The difference was significant (P< 0.05). Common clinical findings was bleeding per vaginal in 65, pain abdomen in 15, growth in 25 and itching/ white discharge in 34 cases. The difference was significant (P< 0.05).

Conclusion: Cervix cancer in females is among various cancer that is showing significantly increase in number. Histopathological evaluation form final diagnosis.

Key words: Cervical cancer, Histopathological, females

Introduction

Histopathology and cytopathology form the scientific and clinical basis for current prevention and treatment of cervical cancer.[1] 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.[2]

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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. 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.[3] The present study was histopathological assessment of lesions of cervix cancer.

Materials & methods

The present cross sectional study comprised of 102 women with history of cervical cancer. During the period of January2022 to August 2022 in the dept of pathology BBMCH, BALANGIR. All were informed regarding the study and their written consent was obtained. Data such as name, age etc. were recorded sampling technique was purposive . The samples were collected using Ayer'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)	Percentage	P value
20-30	20%	0.72
30-40	24%	
40-50	35%	
50-60	11%	
>60	10%	

Table I shows that age group 20-30 years had 20%, 30-40 years had 24%, 40-50 years had 35%, 50-60 years had 11% and >60 years had 10% cases. The difference was non- significant (P> 0.05).

Table II Histopathological variants of cancer

Type	Percentage	P value
Well differentiated squamous cell carcinoma	26%	0.01
Mod. differentiated squamous cell carcinoma	34%	
Poorly differentiated squamous cell carcinoma	12%	
Squamo- transitional cell carcinoma	8%	
Squamo- papillary cell carcinoma	4%	
Adenoid cystic carcinoma	12%	
Adenocarcinoma	4%	

Table II, graph I shows that most common histological variant was moderately differentiated squamous cell carcinoma seen in 34%, followed by well differentiated squamous cell carcinoma in 26%, poorly differentiated squamous cell carcinoma and adenoid cystic carcinoma in 12% each. The difference was significant (P< 0.05).

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Graph I Histopathological variants of cancer

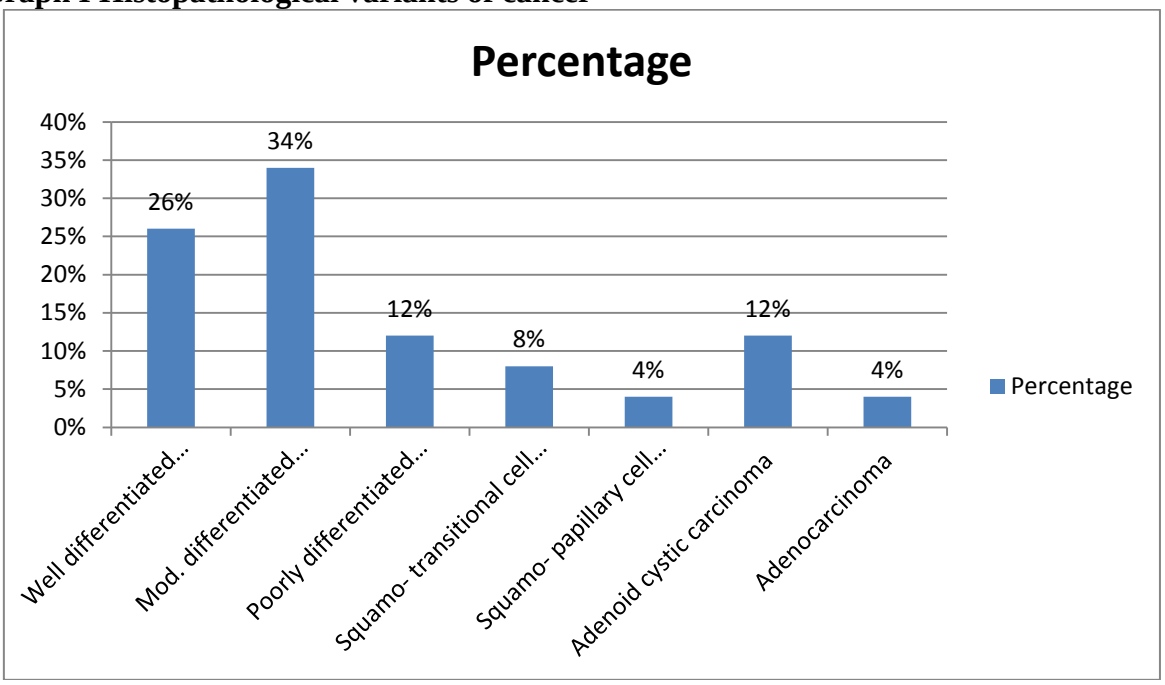

Table III Clinical features in patients

Clinical features	Number	P value
Bleeding P/V	65	0.04
pain abdomen	15	
Growth	25	
Itching/ discharge	34	

Table III shows that common clinical findings was bleeding per vaginal in 65, pain abdomen in 15, growth in 25 and itching/ white discharge in 34 cases. The difference was significant (P< 0.05).

Discussion

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. 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.[4] Infection with some types of HPV is the greatest risk factor for cervical cancer, followed by smoking. HIV 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.[5] The present study was histopathological assessment of lesions of cervix cancer.

We found that age group 20-30 years had 20%, 30-40 years had 24%, 40-50 years had 35%, 50-60 years had 11% and >60 years had 10% cases. Yang et al[6] found a total of 2028 cases. 49 (2.41%) cases revealed epithelial abnormalities. The most frequent epithelial cell

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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 observed that the most common histological variant was moderately differentiated squamous cell carcinoma seen in 34%, followed by well differentiated squamous cell carcinoma in 26%, poorly differentiated squamous cell carcinoma and adenoid cystic carcinoma in 12% each.Similar study conducted by Paul Uchizi Kaseka et al[7] and found that Squamous cell carcinoma (SCC) accounted for 15.6% (n=78) of the total cervical biopsies studied and 85.7% of all total malignant lesions. Adenocarcinoma and undifferentiated carcinoma were 8.8% and 4.4%, respectively of the total malignant diagnosis which were ciose to our study results. . 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 common clinical findings was bleeding per vaginal in 65, pain abdomen in 15, growth in 25 and itching/ white discharge in 34 cases. 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.[8,9,10] 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.[11]

Hung et al[12] found that there were 30,989 records evaluable. From 1973 to 2002, number of cases dropped from 1,100 new cases/year to 900/year, but adenocarcinomas and adenosquamous carcinoma increased from 100/year to 235/year. Median age was 48 years. Statistically significant variables for both overall and cause-specific mortality were: age, year of diagnosis, race, stage, histology, grade, hysterectomy, radiotherapy, tumor size and nodal ratio. The histological types were jointly significant, $P < 0.001$. Cause-specific mortality hazard ratios by histological type relatively to non-microinvasive squamous cell carcinoma were: microinvasive squamous cell carcinoma 0.28 (95% confidence interval: 0.20–0.39), carcinoma not otherwise specified 0.91 (0.79–1.04), non-mucinous adenocarcinoma 1.06 (0.98–1.15), adenosquamous carcinoma 1.35 (1.20–1.51), mucinous adenocarcinoma 1.52 (1.23–1.88), small cell carcinoma 1.94.

Conclusion

Histopathological evaluation of cervical cancer form final diagnosis. Squamous cell carcinoma was more common among all variants . The cause of low incidence of adenocarcinoma required forthere more evaluation and successive studies. observation of increasing numbers of squamous cell carcinomas despite a general decline suggests perfect the of conventional screening for these tumors. Non invasive study like ultrasonography, CT scan, MRI may help for diagnosis of in all stages of cervical cancer which prevent various morbidity as well as mortality due to carcinoma cervix .

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