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Original Research Article

Prospective Observational Assessment of the Histopathology of the Cervical Lesions in a Tertiary Care Hospital

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Abstract

Aim: Histopathological study of cervical lesions in a tertiary care hospital in Bihar region

Material and methods: This prospective observational study was carried out in the Department of Pathology Anugrah Narayan Magadh Medical College and Hospital, Gaya and Patna Medical College and Hospital,Patna, Bihar, India for 1 year. In this study we included 100 patients irrespective of their age, religion who attended the hospital and brief history including chief complaints, obstetric history and relevant history were taken and cervical biopsies or hysterectomy specimen were sent for histopathological confirmation to the department of pathology.

Results: During the period of the present study total of 100 specimens received from the department of gynaecology were processed and reported. Out of 100 cases, 74 (74%) were reported as non-neoplastic lesions, 22(22%) were reported as preinvasive intraepithelial changes, and 4 (4%) were reported as a neoplastic lesion (Table1). In this study 55(55%) were cervicitis, 12(12%) were nabothian cyst and 7(7%) were endocervical polyp (table 2). The most common preinvasive intraepithelial lesion was CIN-I changes (16%).

Conclusion: Our study highlights a vast spectrum of cervical lesions and therefore early detection and management of certain lesions can help in reducing morbidity.

Keywords: Cervical lesions, Histology and pathology, Carcinoma cervix

Introduction

The cervix is the elongated fibro muscular portion of the uterus that measures 2.5 to 3.0 cm, lined by two types of epithelium, an outer squamous epithelium and internal mucin secreting columnar epithelium, with unique junctional area containing reserve/basal cells.[1] Cervix is vulnerable to many pathological changes ranging from inflammation to malignancy. Uterine cervix is gateway to several non-neoplastic and neoplastic gynecological lesions.[2,3] Non-neoplastic cervical lesions are seen in all age groups but are more commonly seen in sexually active women. These include inflammatory and tumor-like non-neoplastic lesions. Majority of non-neoplastic lesions are inflammatory in nature.[4] Inflammatory lesions of clinic pathological importance are acute cervicitis, chronic cervicitis and chronic granulomatous

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cervicitis.[4,5] These can result from both infective and non-infective etiology. Infective causes of acute and chronic cervicitis include a wide spectrum ranging from bacterial, viral, protozoan and fungi microorganisms commonly encountered in sexually transmitted infections (STIs) and urinary tract infections (UTIs). Studies have shown that chronic granulomatous cervicitis is mostly caused by tuberculosis.[6-8] Sexual transmitted viruses include human papilloma virus (HPV) and herpes simplex virus. HPV cervicitis is a causal risk factor for condyloma acuminatum, pre-invasive cervical intraepithelial neoplasia (CIN I, II, III) and eventually cervical cancer.[6,7] Thus, categorization and familiarity of the cervical non-neoplastic lesions with their histomorphologic findings are essential in their recognition and will improve the approach toward better management of the patient.[6] Chronic cervicitis is the most common uterine cervical lesion in the reproductive age group occurring between 25 to 55 years of age linked to sexual activity and also in postmenopausal women because of reduction in immunity and hormonal replacement therapy. [9]

Material and methods

This prospective observational study was carried out in the Department of Pathology,Anugrah Narayan Magadh Medical College and Hospital, Gaya and Patna Medical College and Hospital, Patna, Bihar, India for 1 year.

Methodology

In this study we included 100 patients irrespective of their age, religion who attended the hospital and brief history including chief complaints, obstetric history and relevant history were taken and cervical biopsies or hysterectomy specimen were sent for histopathological confirmation to the department of pathology.

Statistical Analysis: Data was entered in an Excel sheet and values were obtained by frequency, proportion and chi-square test.

Results

During the period of the present study total of 100 specimens received from the department of gynaecology were processed and reported. Out of 100 cases, 74 (74%) were reported as non-neoplastic lesions, 22(22%) were reported as preinvasive intraepithelial changes, and 4 (4%) were reported as a neoplastic lesion (Table1). In this study 55(55%) were cervicitis, 12(12%) were nabothian cyst and 7(7%) were endocervical polyp (table 2). The most common preinvasive intraepithelial lesion was CIN-I changes (16%).

Table1: Age distribution of patients with cervical lesion

Age in years	Frequency	Percentage
21-30	1	1
31-40	31	31
41-50	43	43
51-60	17	17
61-70	7	7
>70	1	1

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Table2: Distribution of types of cervical lesion

Cervical lesion	Frequency	Percentage (%)
Non neoplastic	74	74
Preinvasive	22	22
Malignant	4	4
Total	100	100

Table3: Histological types of cervical lesions

Histological diagnosis	Frequency	Percentage
Chronic non-specific cervicitis	55	55
Granulomatous cervicitis	1	1
Nabothian cyst	12	12
Endocervical polyp	7	7
CIN –I Changes	16	16
CIN –II Changes	2	2
CIN –III Changes	1	1
Carcinoma in situ	1	1
Squamous cell carcinoma	3	3
Adenosquamous carcinoma	1	1
Adenocarcinoma	1	1

Discussion

In our study the most common age group affected was 41-50 years (43%) (Table-1). This age range was comparable with the study done by Krishnappa et al[10], Pradhan et al.,[11]Shruthi et al.,[12] Fotra et al.,[13] Sinha et al.,[14] and Jashamy KA et al.[15]

The present study shows Non-neoplastic lesions (74%) are more common than malignant lesions in the bihar region which was similar to the studies done by Avani J et al[16] and SrivaniS et al[17] in which non-neoplastic lesion were 73% and 79.7% respectively. But on the contrary the study done by Ali EF et al., showed malignant condition (51.2%) were more common than Non-neoplastic (46.34%).

Among non-neoplastic lesion we found that the Chronic non-specific cervicitis accounted highest percentage 55% cases) (Table-3), it could be due to poor personal hygiene, a lack of health awareness and early marriage in the rural bihar region. Chronic non-specific cervicitis accounts for the majority of disease burden in this study compared to the study done by Kiranmayi et al[18] [, Badge et al.[19] A similar finding is also noted by Nwachokor et al[20]. Causative organisms for cervicitis include various organisms like, bacterial, viral, protozoan & fungi.[18] Granulomatous lesions most commonly occur due to Mycobacterium tuberculosis infection and had a very low incidence of 1%.[21,22] In our study two lesions presented as the bulky cervix, was diagnosed with granulomatous cervicitis in histopathology and further microbiological ancillary tests established the cause as Mycobacterium tuberculosis.

Non-neoplastic tumours like lesions such as polyps (endocervical and leiomyomatous) were seen in 7% of cases. It was comparable to studies done by Saravana et al[17]Nwachokor et al[20] and Bansal A et al[23] while it was significantly higher than in a study by Hatwal et al.[24]

In our study the incidence of the preinvasive lesion was 22 %(table-2). Kirammyi et al[14] found a 15.11% preinvasive lesion in his study. In the present study Incidence of CIN-I (16%) was more compared to CIN-II and CIN-III in this study (Table- 3), similarly Badge et al [12] found CIN I in 16.14% and CIN II in 10.25% and Thapa et al[25] found CIN I in 18.06%, CIN II in 20.93%. Malignant lesions comprise 4 (4%) and findings were lower than the results obtained by Avani J et al.[16] and SrivaniS et al[17] in which neoplastic lesion was 5.5% and 9.6% respectively.

The distribution of these 3 tumours in this study is similar to the study done by Shingleton et al.[26] and closely comparable to the studies were done by Jeong et al.,[27] and Galic et al.[28] It was observed that in all studies compared SCC was the most common tumour. Adenosquamous carcinoma of the cervix is rare It is defined as having both glandular and squamous cell differentiation, each component malignant. The present study shows Non-neoplastic lesions were more common than malignant lesion followed by Preinvasive lesion. Chronic cervicitis was the major inflammatory lesions and Squamous Cell Carcinoma was the most common malignant lesions. Authors came across less number of cases of malignancy compared to other studies because this is a tribal rural area where fewer people come to the hospital and in an advanced stage or referred to higher centres for further treatment.

Conclusion

Our study highlights a vast spectrum of cervical lesions and therefore early detection and management of certain lesions can help in reducing morbidity.

References

1. Mohammed H.M. Ali, Hussain Gadelkarim Ahmed, Rashid Awad Salih et. al. Histopathologic Pattern of Cervical Lesions at Omdurman Military hospital, Sudan. *Scholars Journal of Applied Medical Sciences* 2015; 3(8C): 2903-2907
2. Nwachokor FN, Forae GC. Morphological spectrum of non-neoplastic lesions of the uterine cervix in Warri, South-South, Nigeria. Niger J ClinPract. 2013 Oct-Dec;16(4):429-32. doi: 10.4103/1119- 3077.116883
3. Kumari K, Umarani M.K, Bharathi M. Histopathological spectrum of cervical biopsies – a 5 year retrospective study. Trop J Path Micro 2017;3(1):46-51.doi: 10.17511/jopm.2017.i1.08
4. Omoniyi-Esan OG, Osasan SA, Ojo OS. Non-neoplastic diseases of the cervix in Nigeria: A histopathological study. Afr Health Sci2006;6:76-80.
5. Pallipady A, Illanthody S, Vaidya R, Ahmed Z, Suvarna R, Metkar G et al. A Clinico-Morphological spectrum of the Non-neoplastic lesions of the uterine cervix at AJ Hospital Mangalore. Journal of Clinical and Diagnostic Research 2011; 5: 546-50
6. Reddy SD, Rani MS, Rao KS. Clinico- histopathologic study of nonneoplastic uterine cervical lesions. Int J Med Sci Public Health. 2016: 5(8);1536-1539.
7. Bosch FX, Lorincz A, Munoz N, Meijer CJ, Shah KV. The causal relation between human papillomavirus and cervical cancer. J ClinPathol 2002;55(4):244–65.
8. zurHausen H. Papillomaviruses and cancer: from basic studies to clinical application. Nat Rev Cancer 2002;2(5):342.
9. D, Priyadarshini; C. A, Arathi. Histopathological Spectrum of Non- Neoplastic Uterine Cervical Lesions in a Tertiary Care Centre. Annals of Pathology and Laboratory Medicine**,** [S.l.], v. 4, n. 3, p. A303-309, Jul. 2017. ISSN 2349-6983

10. Krishnappa C, Kanabur DR, Dinesh CU. Clinico- morphological Spectrum of Neoplasms of Uterine Cervix in a Tertiary Care Center in North Karnataka, South India. Int J Sci Stud. 2016;4(2)6-12.
11. Pradhan B, Pradhan SB, Mital VP. Correlation of PAP smear findings with clinical findings and cervical biopsy. Kathmandu Univ Med J (KUMJ). 2007;5;461-7.
12. Shruthi PS, Kalyani R, Kai LJ, Narayanaswamy M. Clinicopathological correlation of cervical carcinoma- A tertiary hospital based study. Asian Pac J Cancer Prev. 2014;15;1671-74.
13. Fotra R, Gupta S, Gupta S. Sociodemographic risk factors for cervical cancer in Jammu region of J and K state of India first ever report from Jammu. Indian J Sci Res. 2014;9:105-10.
14. Sinha P, Rekha PR, Subramaniam PM, Konapur PG, Thamilselvi R, Jyothi BL. A Clinicomorphological study of carcinoma cervix. Nat J Basic Med Sci. 2011;2;2-7.
15. Jashamy KA, Al-Naggar RA, San P, Mashani M. Histopathological findings for cervical lesions in Malaysian women. Asian Pac J Cancer Prev. 2009;10;1159-62
16. Jain A, Dhar R, Patro P, et al. Histopathological study of cervical lesions. Int J Health Sci Res. 2018;8(11)82-87
17. Srivani Saravanan, Jonathan Arnold, Arul P. "Histomorphological Spectrum of Lesions of the Cervix, A Retrospective Study in a Tertiary Care Hospital". Journal of Evolution of Medical and Dental Sciences. 2015;July 4(59)10326-10329
18. BVVD Kiranmayi. "Morphological Spectrum of Cervical lesions with an emphasis on Neoplastic lesions - a 2year retrospective study". IOSR Journal of Dental and Medical Sciences (IOSR- JDMS). 2017;16(11)54–57.
19. Bagde, Gupta R, Ganguly S, Bhardwaj A, Jogis. "Spectrum of Cervical Lesions in CIMS, Bilaspur- A 5 years Retrospective Study of 215 Cases in a Tertiary Hospital of Central India". Journal of Evidence based Medicine and Healthcare. 2015Oct-19;2(42)7505-7510.
20. Nwachokor FN, Forae GC. Morphological spectrum of non-neoplastic lesions of the uterine cervix in Warri, south-south, Nigeria. Niger J ClinPract. 2013 Oct-Dec;16(4)429-32. doi: 10.4103/1119-3077.116883
21. Richards MJ, Angus D. Possible sexual transmission of genitourinary tuberculosis. Int J Tuberc Lung Dis. 1998;2;439.
22. oussa B, valentine K,AdamaO,Aziz D A, Idrissa Z, Goumburi LO. Tuberculosis of the Uterine Cervix- About a Case and Literature Review. Open Journal of Obstetrics and Gynecology. 2016;6;734-739
23. Bansal A, Kumar A, Reddy GT. Benign lesions of cervix uteri- without human papilloma virus. International Journal of Research and Review. 2019;6(11)254-259
24. Hatwal D, Batra N, Kumar A, Chaudhari S, Bhatt S. Spectrum of Nonneoplastic Lesions of Uterine Cervix in Uttarakhand. National Journal of Laboratory Medicine. 2016;1-5
25. Tamboli GD, Khatod LV. Accuracy of cytological findings in abnormal cervical smear by cyto- histological comparision. J Medical Education Research. 2013;3(2)19-24
26. Shingleton HM, Bell MC, Fremgen A, Chmiel JS, Russell AH, Jones WB, et al. Is there really a difference in survival of women with squamous cell carcinoma, adenocarcinoma, and adenosquamous cell carcinoma of the cervix?. Cancer. 1995;76;1948-55.
27. Jeong BK, Choi DH, Huh SJ, Park W, Bae DS, Kim BG. The role of squamous cell carcinoma antigen as a prognostic and predictive factor in carcinoma of uterine cervix. Radiat Oncol J. 2011;29;191-8.
28. Bansal S, Lewin SN, Burke WM, Deutsch I, Sun X, Herzog TJ, Wright JD. Sarcoma of the cervix: natural history and outcomes. Gynecol Oncol. 2010 Aug 1;118(2)134-8