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Original Research Article

Benign Lesions of Cervix Uteri: Without Human Papilloma Virus

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ABSTRACT

Background: The benign lesions of cervix are a cause of significant morbidity among women of all age groups but at the brighter side they are easily treatable. Histopathology can easily identify and separate them from Human Papilloma virus infection and carcinoma cervix, thereby helping in patient treatment protocols.
Aim: The present study was conducted to identify and classify, the benign lesions affecting cervix uteri.
Material and Methods: All cervix biopsies and hysterectomy specimens including cervix were studied retrospectively for a two year period (September 2017 to September 2019) at Varun Arjun Medical College and Rohilkhand Hospital, Banthara, Shahjahanpur, UP, India.
Inclusion Criteria: All benign lesions affecting cervix.
Exclusion Criteria: Lesions associated with koilocytic atypia (HPV related changes in Cervical Intraepithelial Neoplasia and Malignant Lesions.
Clinical data including age, parity and clinical presentation were analysed. Histopathology sections were studied and reviewed by two pathologists.
Results: A total of 360 specimens were evaluated. Cervicitis and related conditions constituted 40% of total cases, benign proliferative conditions including polyps constituted 16.2% of cases. Squamous intraepithelial lesions (including HPV changes) and malignant lesions constituted 18% and 25.8% of total cases, respectively. The age range of benign lesions was 15-75 years with maximum number of cases in menopausal and peri-menopausal period (40-49 years). Most common presenting complaints were pervaginal discharge (50%) and menstrual abnormalities (24.8%).
Conclusion: Cervicitis and related conditions were the most common cause of morbidity especially in peri and menopausal age group. Cervical screening and ruling out neoplasia with histopathological examination will help these get proper treatment.
Key Words: Benign, Cervix, Histopathology

INTRODUCTION

Cervicitis and related conditions are the most common finding in women related to cervix uteri. [1] Chronic non specific cervicitis of these is the most common whereas others lesions like acute inflammatory conditions, granulomatous lesions, nabothian follicles, squamous metaplasia are known to coexist or may present as independent lesions. [1,2] The reasons for cervicitis include bacterial, viral, protozoal and fungal organisms and these can be acquired through coitus, conception, pregnancy, delivery or post partum. [3]

Apart from these there are a variety of non neoplastic lesions, of clinical significance which if diagnosed correctly can significantly reduce the associated morbidities. [4,5] These include endocervical glandular hyperplasia, polyps, squamous Metaplasia (erosion), Nabothian cysts

endometriosis and granulation tissue associated with healing and scarring.

The present study was undertaken to estimate the problem status in our surroundings and correctly diagnose these benign conditions so as to reduce patient morbidity.

MATERIALS AND METHODS

All cervix biopsies and hysterectomy specimens including cervix were studied retrospectively for a two year period (September 2017 to September 2019).The hematoxylin and Eosin stained sections were examined and findings recorded by two pathologists. Benign lesions were included in the study, however lesions associated with koilocytic atypia (HPV related changes in Cervical Intraepithelial Neoplasia were not included in benign but classified as squamous intraepithelial lesions. Similarly all malignant lesions were excluded from the study.

The clinical history was taken with due emphasis on presenting sign and symptoms, age and parity of patients.

OBSERVATIONS

The study included only benign lesions (both inflammatory and neoplastic). Cervical Intraepithelial neoplasias including koilocytic changes, precancerous and malignant lesions were excluded from the study.

A total of 360 specimens were studied and evaluated by two pathologists. Maximum numbers of cases were seen in 41-60 years age group 49.4 % followed by 21-40 years age group (41.2%).

Parity wise maximum number of cases were seen in parity 3-6, followed by parity >6 and parity 0-3 constituting 50.8%, 29.2% and 20 % respectively of total number of cases.

The lesions affecting cervix were broadly classified Cervicitis with associated changes, benign proliferative lesions, Squamous intraepithelial lesions and malignant lesions constituted and constituted 40% (144 Cases), 16.2%(58 cases), 18%(65 cases) and 25.8%(93 cases), respectively.

The cervicitis and related conditions were classified into acute cervicitis, Non specific chronic cervicitis and related changes, erosive cervicitis.

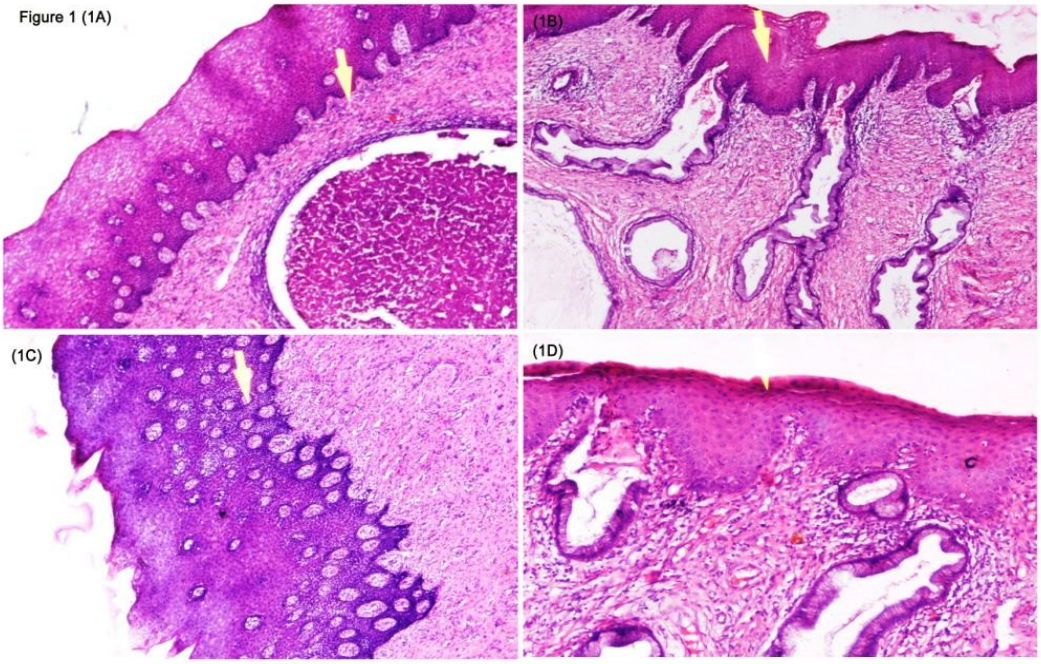

Figure 1:A.Acute Cervicitis with Nabothian Abscess B.Chronic Cervicitis with Squamous metaplasia and Nabothian Cyst C.Chronic Cervicitis with hyperplasia and circumpapillary acanthosis D.Chronic Erosive Cervicitis

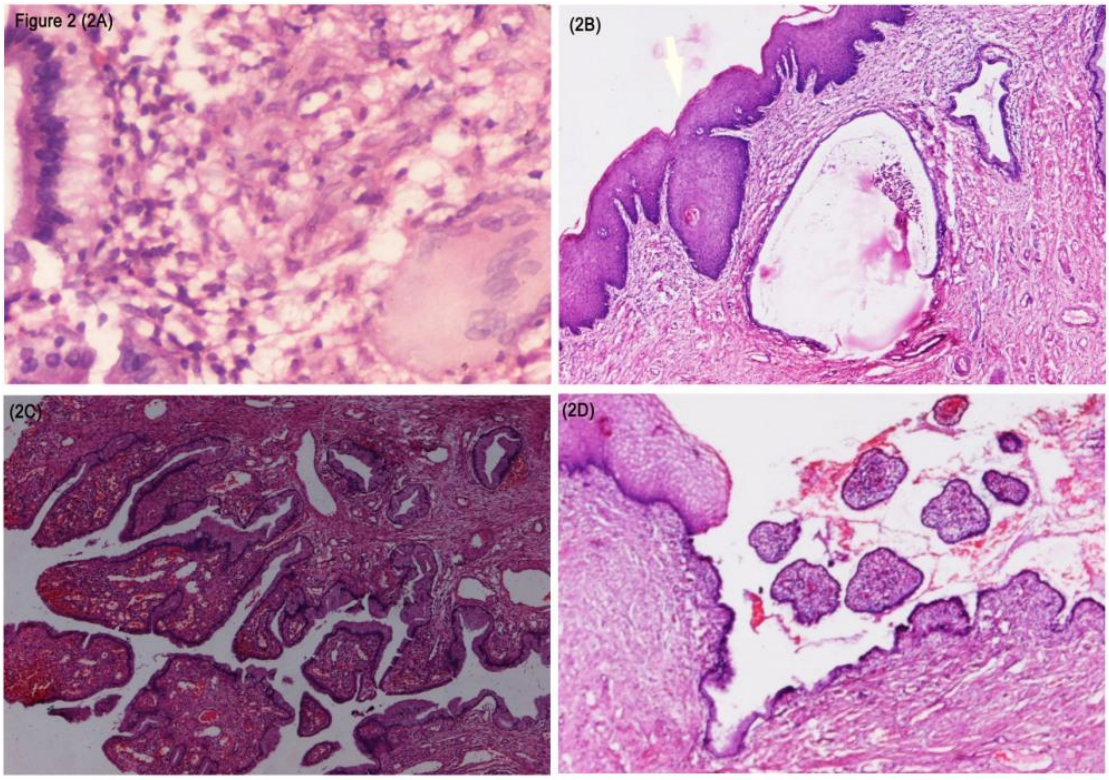

FIGURE 2: A.Granulomatous cervicitis. B.Inverted Squamous PapillomaC. Endocervical Glandular Hyperplasia D. Endocervical Polyps

Benign proliferative lesions included granulomatous proliferations, abnormal non neoplastic squamous proliferations, endocervical glandular hyperplasia and endocervical polyps. (Figure 2)

Table 1 enlists the number of cases of each lesion with respect to total number of benign lesions excluding koilocytic changes. (Table 1).

TABLE 1. Spectrum of Benign Lesions of Cervix (excluding HPV related changes)

Lesion	Number of cases	Percentage with respect to Total cases
Acute cervicitis	06	2.9
Chronic cervicitis and related changes	96	47.5
Chronic cervicitis with nabothian follicles	40	19.8
Granulomatous cervicitis	4	1.9
Abnormal Non Neoplastic squamous proliferations	21	10.4
Endocervical glandular hyperplasia	25	12.5
Endocervical polyps	10	5.0
TOTAL	202	100

TABLE 2: Clinical presentations and Findings

Presenting Symptoms Number of Cases/percentage	Per speculum findings Number of Cases/percentage	Per-vaginal findings Number of Cases/percentage
Discharge P/V (101/50)	Reddened well defined area(Cervix) 140/69.3	Discharge 140/69.3
Postcoital bleeding (20/9.9)	Cauliflower growth 02/0.9	Bleeding 32/15.8
Menstrual abnormalities (50/24.8	Ulcerated growth 24/11.9	Bulky uterus 20/9.9
Protruding mass (04/2.0)	Friability 06/3.0	Protruding mass 10/5.0
Cachexic symptoms (14/6.9)	Bleeding on touch 30/14.9	
Pyometra (18/8.9)		
Retention of urine (08/4.0)		

Maximum numbers of cases were of chronic cervicitis (67.3%) with most common presenting symptom being per vaginal discharge (69.3 %) of cases. Other presenting symptoms/ complaints were menstrual abnormalities, post coital bleeding, mass, constitutional symptoms including weight loss and pyometra. The most common per speculum and per vaginal findings were clinical erosion of cervix and bleeding both constituting 69.3 % of cases. (Table 2)

DISCUSSION

Cervicitis and related conditions are the most common finding in women related to cervix uteri. [1] Chronic non specific cervicitis of these is the most common whereas others lesions like acute inflammatory conditions, granulomatous lesions, nabothian follicles, squamous metaplasia are known to coexist or may present as independent lesions. [1,2] The reasons for cervicitis include bacterial, viral, protozoal and fungal organisms and these can be acquired through coitus, conception, pregnancy, delivery or post partum. [3]

Apart from these there are a variety of non neoplastic lesions, of clinical significance which if diagnosed correctly can significantly reduce the associated morbidities. [4,5] These include endocervical glandular hyperplasia, polyps, squamous Metaplasia (erosion), Nabothian cysts endometriosis and granulation tissue associated with healing and scarring.

The age of histopathological evaluation in previous studies has been between 20- 80 years and with maximum number of cervix associated lesions (45%) in the 41-50 years age group. [3] This was comparable our study where maximum number of cases were seen in 41-60 years age group 49.4 % followed by 21-40 years age group(41.2%). This points out that pre-peri and post menopausal women are most likely to develop lesions in cervix uteri which attributed to hormonal changes in this age group which significantly alters the micro environment. [6]

Parity wise maximum number of cases were seen in parity 3-6, followed by parity >6 and parity 0-3 constituting 50.8%, 29.2% and 20 % respectively of total number of cases. This was in accordance with study By Bindal etal where in parity-3 were the highest affected closely followed by parity 2 and parity 4. This again shows that pathology of the cervix has close association with the incidence of child bearing and birth. [7]

Acute cervicitis had relatively low incidence 2.9 %and was comparable to findings of Omoniyi-Esan OG etal. However this was signicantly lower than 7.6 % of all non-neoplastic lesions as reported by Nwacholkor et al. [2]

The incidence of chronic non specific cervicitis including chronic cervicitis with Nabothian follicles was 47.5 and 19.8 percent respectively, constituting 67.3 % of all non neoplastic lesions. This was lower than previous studies which reported an incidence of 59.8 to 98 %. [2,3,8,9,10] But was higher than in other studies where incidence ranging from 17 to 48 percent was reported. [3,4,11] The possible reason is with time more female patients in our scenario have access to clinical care thereby increased incidence whereas the other studies with higher incidence already had patient awareness. The most common presenting symptom was discharge per vagina and was comparable to other clinico-pathological correlational studies. [2,3,5,8]

Granulomatous lesions most commonly occur due to Mycobacterium tuberculosis infection in our environment and had a very low incidence of 1.98%. Previous studies have also reported low incidence 0.1-0.6% and the disease can mimic cancer of cervix. [12,13] In our study three lesions presented as an ill defined small mass, so we preferred the term Granulomatous lesion over granulomatous cervicitis. Histopathology in all these cases established the diagnoses of granulomatous lesion and further microbiological ancillary tests established the cause as Mycobacterium tuberculosis.

Abnormal Non Neoplastic squamous proliferation included epidermal hyperplasia, circumpapillary acanthosis, squamous Metaplasia (Clinically erosion), inverted squamous papilloma. All these lesions are classified under erosive cervicitis, pseudoepitheliomatous hyperplasia and constituted 10.4 % of all non neoplastic cervix lesions were comparable to previous studies. [2,3,5]

Endocervical glandular hyperplasia was seen in 12.5% of all non neoplastic lesions and was significantly higher than other studies by Pallipady et al and Hatwal D et al who reported this as 4.3% and 1.26 % respectively. [5,14] The most probable reason being that lesion is more prevalent in our region and requires careful histopathological examination as can mimic glandular neoplastic conditions and may be a precursor to glandular malignancies.

Endocervical polyps constitutes 4.9 of all non neoplastic lesions and on comparison was significantly higher than in study by Hatwal et al. (1.08%) but was comparable to studies Nwachokor et al and Pallipadt et al. (14,2,5)

CONCLUSION

In this study we excluded all the Human papilloma Virus related lesions and malignant affecting the uterine cervix and still were able to find a spectrum of lesions which can mimic these conditions, most commonly in peri and post menopausal women. Histopathology of these lesions can help diagnose them correctly thereby significantly reducing morbidity and patient anxiety and at the same time provide for early diagnoses of premalignant and malignant lesions.

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