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Original Research Article

Cervical polyp: histomorphological spectrum of ninety-two cases a five-year study

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ABSTRACT

Background: Cervix is vulnerable to many pathological changes ranging from inflammation to malignancy. Cervical polyp is one of the commonest cervical lesions seen in about 2-5% of women. They are more frequent in parous women and are mostly asymptomatic. Symptomatic polyps are frequent in the premenopausal women with most common clinical presentation of AUB (abnormal uterine bleed). Usually, they are benign but there are chances of malignant transformation. This study was done to analyse the clinico-pathological spectrum of cervical polyp at a tertiary care institute

Methods: A retrospective study was conducted in department of Pathology, BPS GMC for Women Khanpur Kalan, Sonapat over a period of 5 years. All patients who had been diagnosed with cervical polyp clinically and underwent subsequent histopathological sampling were included.

Results: A total of 92 cases were included in the study. AUB was the most common clinical presentation of these patients with cervical polyp. Most common age group was 30 to 55 years. Out of 92 cases 47 were of endocervical type polyp, followed by 20 cases of leiomyomatous polyp

Conclusions: To conclude in this study we found that the most common type of cervical polyp is endocervical type. Keeping in view the malignant transformation histopathological sampling of polyp is essential.

Keywords: AUB, Cervical lesions, Cervical polyp

INTRODUCTION

Cervix is vulnerable to wide range of changes as it is exposed to many types of insults making it susceptible to many physiological and pathological changes ranging from inflammation to malignancy. Cervical polyps have documented to be the most frequent pathological condition of the cervix with a prevalence of 2-5% in women among general population.¹ They usually occur because of chronic irritation to cervix leading to focal hyperplastic protrusions of the endocervical folds, including the epithelium and substantia propria.² Cervical polyp are seen more commonly in parous women over 20 years of age as they are commonly exposed to agents like infections. Cervical polyps are mostly asymptomatic and

found on routine speculum examination of cervix.³ They are not expected to resolve spontaneously and often become symptomatic and can present with symptoms such as intermenstrual, postcoital or postmenopausal bleeding, which are similar to symptoms of malignancy and other symptoms include vaginal discharge, dyspareunia, urinary retention and constipation.⁴ Cervical polyps vary in size from few millimeters to 3- 4 cm and can occur singly or in groups of two or three.⁵ They are most commonly cherry red to purplish red in colour, soft, pliable, fleshy growths which are often pedunculated. They are friable and bleed easily when manipulated.⁶ Although most cervical polyps are benign, studies in the 1940s and 1950s suggested that 0.2–1.7% of cervical polyps are associated with malignancy.⁷ Recent data have

shown the prevalence of malignancy associated with cervical polyps to be approximately 0.1%.⁸ As there are many other polypoidal, malignant and premalignant lesions that can present clinically like cervical polyp like mullerian adenosarcoma, botryoid rhabdomyosarcoma, lung metastasis and papillary carcinoma of ovary.⁹⁻¹² Cervical polyps can also rarely harbour malignant foci or benign polyps can progress to malignancy or can recur. Hence, polyps should be removed and examined microscopically.¹³ Moreover, the routine removal of cervical polyp is easy and require out patient manipulation only. Keeping in view the similarity of clinical features of various polypoidal lesions of cervix excision of the polyp is mandatory and to identify and to rule out any malignant transformation. The study was conducted in women who presented with polypoidal growths arising from cervix. The spectrum of histopathological diagnosis in these cervical polyps was analysed for period of six years and any malignant focus, dysplasia or atypia if present were identified.

METHODS

Study design, location and duration

Current study was a retrospective study conducted at department of pathology, BPS GMC, Khanpur Kalan from January 2017- December 2021 (5 years).

Procedure

All patients who had been diagnosed with cervical polyp clinically and underwent subsequent histopathological sampling were included in the study. The samples along with relevant clinical details were received in 10% formalin, gross findings were noted and multiple representative sections were taken. The specimens were processed by standard technique. Four-to-six-micron thick paraffin embedded sections were taken and stained by haematoxylin and eosin using standard protocols. Stained slides were examined under microscope for various histopathological patterns.

RESULTS

During the period of 5 years 92 cases of cervical polyps were received in the department. The age distribution of the sample was between 22-85 years (Table 1). Mean age of presentation was 42 years. Among 92 cases, 34.7% women were diagnosed with cervical polyp in the age group of 41-50 years followed by 31.5% women in 31 - 40 years age group. Only one case each in 8th and 9th decades were present. No polyp was observed before the age of 23 years and after 85 years of age, in our study. All types of cervical polyps were common in the age group 41- 50 year. Cervical polyps were less commonly found after 60 years of age. (Table 1).

Most of the patients were asymptomatic and 9.7% of them presented with abnormal uterine bleeding.

Endocervical polyp was found to be the most common type (51%) out of which 15 cases were found to be of inflamed endocervical polyp which were 16.3% of total cases followed by leiomyomatous polyp and cervical polyp 21.7% each. There were no foci of malignancy identified in any of these polyps (Table 2-3).

Table 1: Age related distribution.

Age group (years)	N	%
21-30	12	13.04
31-40	29	31.52
41-50	32	34.78
51-60	13	14.13
61-70	4	4.34
71-80	1	1.08
81-85	1	1.08
Total	92	100

Table 2: Histopathological diagnosis of cervical polyps.

Histopathology	N	%
Endocervical polyp	47	51.0
Inflamed endocervical polyp	15	16.3
Leiomyomatous polyp (without/with mitosis)	20	21.7
Cervical polyp	20	1.7
Ectocervical polyp	2	2.17
Adenomyomatous polyp (without/with atypia)	2	2.17
Endometrial polyp	1	1.08
Total	92	100

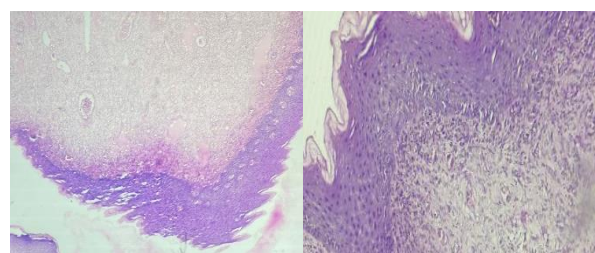


Figure 1: Cervical polyp - H&E stain 40X and 100X, H&E stained slide (40X magnification) shows keratinised stratified squamous epithelium lined polyp with sub epithelium comprising of congested blood vessels (100X magnification).

DISCUSSION

In our study, cervical polyps were most common in the age group 41-50 years (34.7%) followed by 31-40 years (31.5%). A study done by Tirapur et al found maximum incidence of cervical polyp in the age group 25-45 years.¹⁴ Also our results were similar to findings in studies by Pallipady et al where cervical polyps are more commonly seen in the reproductive age especially after

40 years of age.¹⁵ Wachokor FNN et al found peak incidence of endocervical polyps in the fifth decade.¹⁶ In another study done by Gopalan et al on 107 patients

found that 47.7% women were in the age group of 40-49 years, findings similar to findings in our study.¹

Table 3: Age wise distribution of type of cervical polyp.

Age Group (years)	Distribution of type cervical polyp N (%)									
	Endo-cervical polyp	Leiomyomatous polyp	Cervical polyp	Inflamed endocervical polyp	Ecto-endocervical polyp	Ecto-cervical polyp	Adenomatous polyp	Endo-cervical endometrial polyp	Atypical polypoid adenomyoma	Mitotically active leiomyoma
21-30	5 (15.6)	2 (10.5)	3 (17.6)	4 (26.6)	1 (33.3)	-	1 (100)	0	0	1 (100)
31-40	8 (25)	4 (21)	7 (38.9)	4 (26.6)	1 (33.3)	1 (50)	0	0	1 (100)	0
41-50	13 (40.6)	12 (63.2)	5 (29.4)	5 (33.3)	1 (33.3)	1 (50)	0	0	0	0
51-60	5 (15.6)	0	0	1 (6.7)	0	0	0	1 (100)	0	0
61-70	1 (3.1)	1 (5.3)	1 (5.8)	0	0	0	0	0	0	0
71-80	0	0	1(5.8)	0	0	0	0	0	0	0
81-90	0	0	0	1 (6.7)	0	0	0	0	0	0
Total	32 (100)	19 (100)	17 (100)	15 (100)	3 (100)	2 (100)	1 (100)	1 (100)	1 (100)	1 (100)

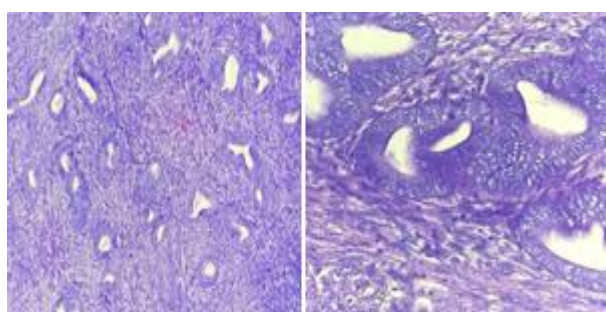


Figure 2: Atypical polypoid adenomyoma-H&E stain 100X and 400X H&E stained slide (100X magnification) shows irregular endometrial glands arranged haphazardly. Stroma is fibromyomatous 400X magnification shows individual glands with the cuboidal-low columnar epithelium.

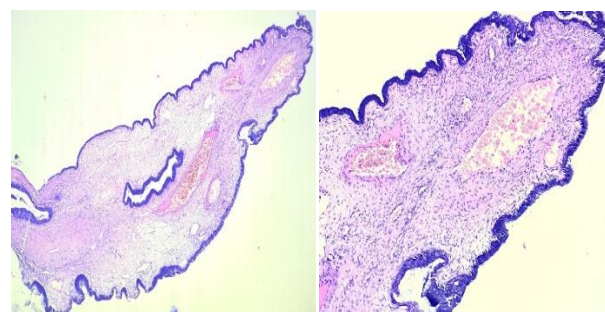


Figure 4: Inflamed endocervical polyp-H&E stain 40X and 100X, H&E stained slide (40X and 100X magnification) shows polypoid tissue lined by endocervical lining. Subepithelium shows fibrovascular core comprising of congested blood vessels, endocervical glands and inflammatory infiltrate comprising of mononuclear cells.

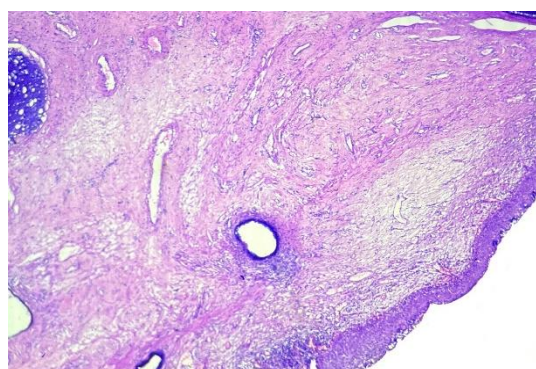


Figure 3: Endocervical polyp - H&E stain 40X and 100X (inset) H&E-stained slide (40X magnification) shows polypoid tissue lined by squamous epithelium. Subepithelium shows nabothian cyst and multiple endocervical glands. Inset (100X magnification) shows section of the polyp lined by endocervical epithelium.

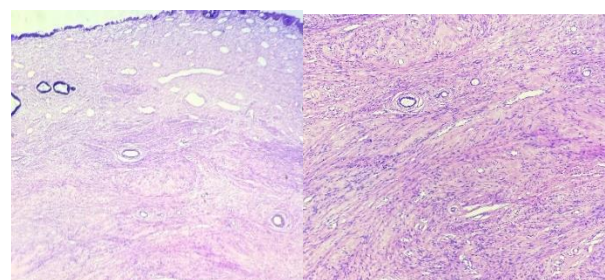


Figure 5: Leiomyomatous polyp H&E stain 40X and 100X (inset) H&E stained slide (40X and 100X magnification) shows endocervical epithelium lined tissue. Subepithelium shows smooth muscle cells arranged in multiple interlacing fascicles. Individual cells are uniform with elongated nuclei with vesicular chromatin. Multiple endocervical glands also identified.

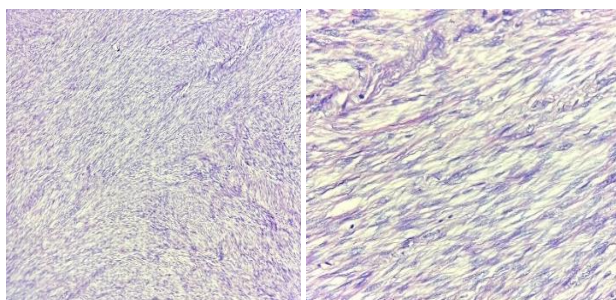


Figure 6: Mitotically active leiomyoma H&E stain 100X and 400X, H&E stained slide (100X and 400X magnification) shows smooth muscle cells arranged in multiple interlacing fascicles. Individual cells have with round to spindle nuclei with vesicular chromatin, inconspicuous nucleoli with moderate pleomorphism. Mitotic count is 10-15/hpf.

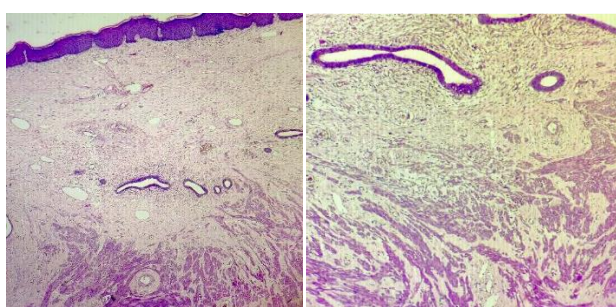


Figure 7: Adenomyomatous Polyp - H&E stain 40X and 100X, H&E stained slide (40X and 100X magnification) shows stratified squamous epithelium lined tissue. The subepithelium comprise of irregular small and large glands.

In our study the most common histopathological finding was endocervical polyp (51%) followed by leiomyomatous polyp (21.7%), cervical polyp (21.7%), inflamed endocervical polyp (16.3%), ectocervical polyp and adenomyomatous polyp (2.17%). A study by Gopalan et al reported endocervical mucous polyp to be the most common lesion (50.5%) followed by benign endometrial polyp (21.5%) and leiomyomatous polyp in 13.1%.¹ Another study by Nelson et al also found endocervical polyp (57.1%) to be the most common followed by inflamed endocervical polyp (21%). Both the studies had finding concordant to findings in our study.¹⁷

None of the cervical polyps removed in our study showed features of atypia, dysplasia or malignancy. This is in discordance with the findings of Berzolla et al who found a prevalence rate of 0.1% for malignancy and Schnatz et al who found a prevalence rate of 1.4-2.7% for any abnormality.^{18,8} Gopalan et al, Tirlapur, Senturk et al and Mackenzie et al also found no features of atypia, dysplasia or malignancy.^{1,14,19,20} Mackenzie et al also questioned the removal of polyp unless symptomatic, similar to this study asymptomatic cases also came up in our study.²⁰

CONCLUSION

In our study we observed most cervical polyp as endocervical polyp type that too, most commonly in peri and post-menopausal age group. Although incidence of malignancy in this is very low as no primary malignant case was identified. They need to be removed in symptomatic cases, especially in peri and post-menopausal women and subsequent histologic review is warranted to rule out any atypical change, dysplasia or malignant change. The regular follow up is advised.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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