ORIGINAL ARTICLE

Spectrum of Polypoidal Lesions of the Female Genital Tract

Anu Gupta, Bharti Thaker, Subhash Bhardwaj

Abstract

Background Polypoidal lesions of the female genital tract are clinically significant and show various morphological spectrum ranging from inflammatory to neoplastic and may mimic or harbour malignancy. Aim: To study the spectrum of polypoidal lesions in the whole female genital tract and its correlation with clinicopathological parameters was evaluated. **Materials &Methods** A retrospective study was conducted over a period of 3 years (2018-2021) for all the polypoidal lesions. The relevant details of the patient regarding age, menopausal status, clinical presentation, size of polyp, its location and final histopathological diagnosis were recorded and analysed. The H&E stained slides were meticulously re-examined and fresh sections were obtained wherever required. **Results** Out of a total of 58 polypoidal lesions, maximum were benign 53 (91.37%) and 5 cases (8.62%) were found to be malignant. Uterine polyps 50% outnumbered all the other polyps of FGT. The age range was between 5 to 70 years with the youngest girl of 5 years diagnosed as Botyroid Rhabdomyosarcoma of vagina and oldest 70 years diagnosed as Squamous cell carcinoma of cervix, both presenting as polypoidal lesions. Abnormal Uterine Bleeding (AUB) was the most common clinical manifestations.

Key Words

FGT (Female Genital Tract), EP (Endometrial Polyp), AUB (Abnormal Uterine Bleeding), Polyp, FEP (Fibroepithelial Polyp)

Introduction

The word polyp arises from the ancient Greek word "Polypus" meaning many feet. Polyps are tissue outgrowths may be single or multiple, sessile or broad based, pedunculated with a stalk. Gynaecological polyps are categorized based on their location and type as uterine, cervical, vaginal and vulval polyps. The exact epidemiology remains unclear. However published studies describe the involvement of various factors like genetics, enzymes, diabetes mellitus, obesity, hypertension, age, menopause status and steroid hormone receptors responsible. [1,2] According to Uglietti *et al* [3] postmenopausal women are at higher risk of having malignant EP's compared to premenopausal women. A small percentage of polyps transform into malignancies. The question is of particular importance given the increasing frequency of polyp diagnosis in both symptomatic and asymptomatic women. In symptomatic cases, AUB, post menopausal bleeding and infertility tend to be the most common presenting complaints.

Hysteroscopic resection is the gold standard of treatment.The most trustworthy histological features used to identify a polyp are the presence of focal glandular

PG Department of Pathology , Govt. Medical College Jammu J&K -India
Correspondence to: **Dr Bharti Thaker Lecturer, Department of Pathology, Government Medical College, Jammu (J&K), India.**
Manuscript Received: 28 June 2021; **Revision Accepted**: 14. 09. 2021
Published Online First: 10 April 2022
Open Access at: https://journal.jkscience.org

Cite this article as: Gupta A, Thaker B, Bhardwaj S. Spectrum of polypoidal lesions of the female genital tract JK Science 2022;24(2):118-122

clusters followed by fibrous stroma.

Materials & Methods

The study was conducted in the histopathology section of the Department of Pathology, Government Medical College, Jammu and was approved by the Institutional Ethical Committee with Registration No C-107. The study design was retrospective over a period of 3 years (2018-2021) encompassing all the polypoidal lesions of FGT received either as a part of pan-hysterectomies, hysterectomies or individual polyps. The clinical forms were reviewed for age, menopausal status, clinical presentation and gross features of the specimen. The H&E stained slides were re-examined for a detailed analysis of the histological patterns of various polypoidal lesions of FGT. Fresh sections were obtained from gross specimens or from paraffin blocks, routinely processed and stained.

Results

A total of 58 polypoidal lesions of female genital tract were encountered over a period of 3 years. Majority of the lesions were benign i.e 53 (91.37%) and rest 5 cases (8.62%) were malignant. Distribution of polypoidal lesions in FGT is shown in *Table 1* while *Table 2* summarizes the pathological spectrum of polypoidal lesions.

Uterine polyps constituted majority 29 cases (50%) out of which endometrial polyps (hyperplastic + functional) were seen in maximum 19 cases (32.75%). Microscopically majority of the polyps showed cystically dilated glands and a fibrous stroma with thick walled vessels (*Fig 1*). There was 1 case each of low Grade Endometrial Stromal Sarcoma and Malignant Mixed Mullerian Tumor (MMMC) presenting as polyp in the uterine cavity. Case of MMMT was seen in a 60 years old female presenting with postmenopausal bleeding. Microscopically the carcinomatous components was endometrioid type admixed with sarcomatous element in the form of Spindle cells resembling Leiomyosarcoma.

Among the 20 cases (34.48%) of cervical polyps, endocervical polyps (*Fig 2*) constituted 11 cases (19%) followed by leiomyomatous polyps 5 cases (8.60%) and 2 cases (3.44%) each of microglandular endocervical hyperplasia and squamous cell carcinoma. Endocervical polyps are focal hyperplastic protrusions of endocervical folds. The most common type in our study was lined by tall columnar mucinous epithelium.

Microglandular endocervical hyperplasia microscopically showed complex proliferation of small variable glands lined by flat to cuboidal epithelial cells with no atypia with stroma showing chronic inflammation. Invasive SCC of cervix is a most common malignant tumour of FGT and was seen in post menopausal females in our study. Histomorphologically were well to moderately differentiated SCC (*Fig 3*).

Vaginal and vulval polyps together constituted 9 cases with fibroepithelial polyps seen as 3 cases (5.17%) in vagina and 1 case (1.72%) in vulva. There was 1 case (1.72%) each of Squamous papilloma and Botryoid Rhabdomyosarcoma. Urethral caruncle was seen in 2 cases (3.44%) and Hidradenoma papilliferum constitutred 1 case (1.72%) in vulva. Case of Botryoid Rhabdomyosarcoma (Sarcoma Botryoides) was seen in a young 5 years old girl presenting with vaginal polyp and on H&E examination of slide showed undifferentiated round to spindle cell in a myxoid stroma. Some of these cells contains eosinophilic granular cytoplasm suggestive of rhabdomyoblastic differentiation. Tumor cells were seen surrounding blood vessels with areas of necrosis (*Fig 4*).

Hidradenoma papilliferum a benign tumor of apocrine sweat gland origin seen as vulval nodule in a 20 years old female. Microscopically under low power examination it simulates a well differentiated adenocarcinoma composed of numerous tubules and acini lined by a single or double layer of cuboidal cells showing mild degree of cellular and nuclear pleomorphism with no mitotic activity. The tumor probably arises from ectopic breast tissue.

There were two cases of vulval polyps diagnosed as urethral caruncles. Microscopically showed inflamed, everted urethral mucosa.

Clinicopathological profile of all polypoidal lesions of FGT is shown in *Table. 3*. The age of patients ranged from youngest 5 years to oldest 70 years. Most of the females 41 (70.68%) were premenopausal and mostly presenting with AUB in 22 (37.93%) as commonest clinical presentation.Size of the polyps in our study ranged from 1-4cm with maximum polyps of 3-4cm.

Table. 1 Type of polyps and their distribution in FGT

S. No	Type	Benign	Malignant	Total
1	**Uterine Polyp**	27	02	**29**
2	**Cervical polyp**	18	02	**20**
3	**Vaginal Polyp**	04	01	**05**
4	**Vulval Polyp**	04	0	**04**
5	**Total**	**53**	**05**	**58**

Table. 2 Pathological Spectrum of Polypoidal Lesions

S. No	Category	Sub category	No. of Cases (%)
1	**Uterine Polyp**		29 (50)
1.a		Endometrial Polyp	19 (32.75)
1.b		Leiomyomatous Polyp	08 (13.79)
1.c		Low grade Endometrial Stromal sarcoma	01 (1.72)
1.d		Malignant Mixed Mullerian Tumor (MMMT)	01 (1.72)
2	**Cervical Polyp**		20 (34.48)
2.a		Endocervical polyp	11 (19)
2.b		Leiomyomatous polyp	05 (8.6)
2.c		Microglandular Endocervical Hyperplasia	02 (3.44)
2.d		Squamous cell Carcinoma	02 (3.44)
3	**Vaginal Polyp**		05 (8.6)
		Squamous Papilloma	01 (1.72)
3.a		Fibroepithelial Polyp	03 (5.17)
		Botryoid Rhabdomyosarcoma	01 (1.72)
4	**Vulval Polyp**		04 (6.89)
4.a		Fibro epithelial polyp	01 (1.72)
4.b		Urethral Caruncle	02 (3.44)
4.c		Hidradenoma Papillafarum	01 (1.72)

Table 3. Clinicopathological profile of all polypoidal Lesions of FGT.

S. No	Features	Categories	No. of Cases (%)
1	**Age**	**<20 Years**	03 (5.17)
		21-30 years	10 (17.24)
		31-40 years	11 (19.00)
		41-50 years	20 (34.48)
		51-60 years	08 (13.79)
		>60 years	06 (10.34)
2	**Menopausal Status**	**Premenopausal**	41 (70.68)
		Post-Menopausal	17 (29.31)
3	**Clinical Presentation**	**AUB**	22 (37.93)
		Post-Menopausal Bleeding	12 (20.68)
		Menorrhagia	08 (13.79)
		Mass	10 (17.24)
		Infertility	06 (10.34)
3	**Size of Polyp Maximum Dimension**	**1-2cm**	20 (34.48)
		3-4cm	32 (55.17)
		>4cm	06 (10.34)

Discussion

Polyps of the reproductive tract are found in 7.8-50% of women. [4] Polyps occur in both pre and post menopausal women and are thought to be related in some way to

Fig I. . Photomicrograph Showing Endometrial Polyp. (X40)

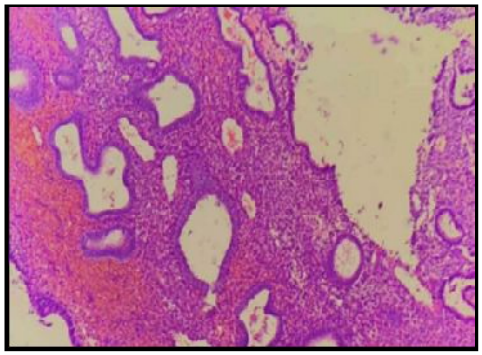


Fig 3. Photomicrograph showing Moderately differentiated Squamous cells carcinoma cervix. (X40)

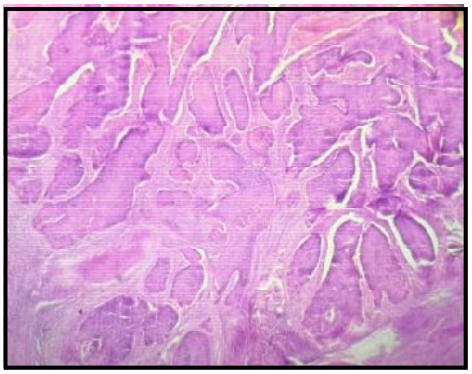


Fig 2. Photomicrograph Showing Endocervical Polyp Containing Endocervical Glands in a Fibrous Stroma. (X40)

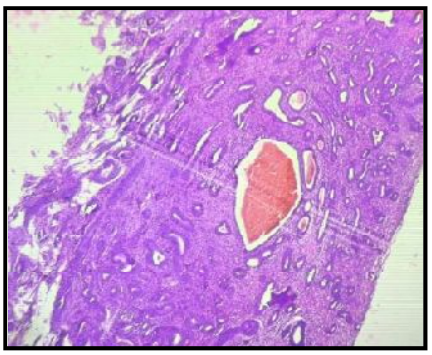
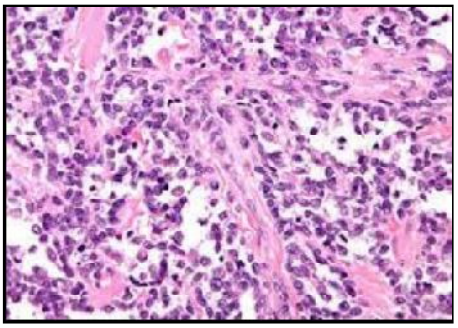


Fig 4. Photomicrograph of Sarcoma Botryoides Showing Undifferentiated Round Tumor cells Arranged Around Blood Vessels. (X40)



hyperestrogenism.[5] In a histopathological study of spectrum of polypoidal lesions of uterus, Pujani M *et al* [8] noted 44 polypoidal lesions of uterus and out of which maximum 37 (84.09%) were benign. In the present study too 91.37% (53/58) polypoidal lesions were benign and uterine polyps 50% (29/58) outnumbered all the other FGT polyps.

Endometrial polyps are considered hyperplastic growths of stroma and endometrial glands. They are usually benign as seen in our study but can be malignant in some cases. However, the incidence of malignancy in polyps is still low according to various studies in literature. [6,7] Present study had one case of low grade endometrial stromal sarcoma presenting as uterine polyp in a hysterectomy specimen similar to the study of Pujani M *et al*. [8] Histomorphologically tumor cells were round to oval with fine chromatin, inconspicuous nucleoli and scanty cytoplasm resembling stromal cells in proliferative endometrium. Mitotic count was low and cells had invaded the myometrium along with vascular channels.

Cervical polyps constituted 20 cases (34.48%) in our study very similar to findings of Sidhalingreddy [9] where endocervical polyps followed by leiomyomatous polyps were most frequent. There were two cases of polyps in cervix which turned out to be well to moderately differentiated SCC both seen in elderly females.

Vaginal polyps constituted 5 cases in the present study with Fibroepithelial polyps comprising majority with 3 cases. They are probably not true neoplasms but rather manifestations of hormone induced localized hyperplasia of loose sub-epithelial connective tissue zone, others may represent the end stage of granulation tissue.[10] FEP histologically show fibrovascular stalk with edematous stroma lined by squamous epithelium. FEPs are usually benign and bland, however those that exhibit bizarre morphology, atypical mitosis or hypercellularity may be confused with sarcoma botryoides and mixed mesenchymal tumor. [11] Primary vaginal cancer is rare constituting 1-2% of all FGT malignancies.[12] Rhabdomyosarcomas are the most common soft tissue

cancers in children and adolescents. 20% of these occur in the lower genital tract and more than 50% are of embryonal histologic subtype. [13]

Although, vulva is a relatively limited compartment but its different components could result in a variety of epithelial, adnexal, melanocytic and mesenchymal neoplasms in any age group. Our study showed 4 polypoidal lesions of vulva and all were benign. 2 were urethtal caruncles and 1 case each of hidradenoma pappillafarum. Urethral caruncles are reactive polypoid lesions of the urethral orifice. Some cases could be confused with benign or even malignant lesions.[14] No malignant lesion was seen in vulva in the present study similar to the findings of Abdull Gaffar. [15] Maximum polyps were seen in the age group of 41-50 years followed by that in 31-40 years. This is in accordance with the study of Pujani *et al.* [8]

The wide use of transvaginal ultrasound (TVU) during routine gynaecological examinations has contributed to an increase in accuracy and number of patients diagnosed with polyps in premenopausal women. Mihm *et al* [16] in their series of 114 women reported presence of EP's in 35% females with AUB. Salim *et al* [17] found that the size of the endometrial polyps correlates with their likelihood of regression when followed up after 1 year. Polyps greater than 4cm are considered giant polyps. Nair V [18] reported a case of giant endometrial polyp in a post menopausal women, but there was no such case of polyp more than 4cm in the present study.

Conclusion

Thus we conclude on the premise that polyps form an important lesion in the FGT so a careful histopathological scrutiny of all polypoidal lesions should be done to rule out any premalignant or malignant possibility. Awareness of the spectrum and clinicopathological features allows proper diagnosis and management.

Financial Support and Sponsorship

Nil.

Conflicts of Interest

There are no conflicts of interest.

References

1. Serhat E, Cogendez E, Selcuk S, Asoglu MR, Arioglu PF, Eren S, Is there a relationship between endometrial polyps and obesity, diabetes mellitus, hypertension? Arch Gynecol Obstet 2014;290(5):937-41.
2. Levy RA, Kumarapeli RA, Spencer HJ, Quick CM. Cervical polyps : is histologic evaluation necessary? Pathol Res Pract 2016;212(9):800-03.
3. Uglietti A, Mazzei C, Deminico M, Somigliana E, Vercellini P, Fedele L. Endometrial polyps detected at ultrasound and rate of malignancy. Arch Gynecol Obstet 2014;289 (4): 839-43.
4. Tanos V, Berry K, Seikkula J, AbiRaad E, Stavroulis A, Sleiman Z et al. The management of polyps in female reproductive organs. Int J Surg 2017;43:7-16.
5. Mccluggage WG. Benign diseases of the endometrium. In: Kurman RJ, Ellenson LH, Ronnett BM. Blaustein's Pathology of the Female Genital Tract. 6th edn. Springer:London;2011.pp342-43.
6. Lenci MA, Nascimento VA, Grandini AB, Fahmy WM, Depes Dde B, Baracat FF, *et al*. Premalignant and malignant lesions in endometrial polyps in patients undergoing hysteroscopic polypectomy 2014;12:16-21.
7. Baiocchi G, Manci N, Pazzaglia M, Giannone L, Burnelli L, Giannone E, *et al*. Malignancy in endometrial polyps : A 12 year experience. Obstet Gynecol Survey 2010;65(2): 96-97.
8. Pujani M, Hassan MJ, Jetley S, Jairajpuri ZS, Khan S, Rana S, *et al*. A critical appraisal of the spectrum of polypoidal lesions of uterus: A pathologist's perspective. Al Ameen J Med Sci 2018;11(1):35-41.
9. Sidhalingreddy, Biradar S, Akhila, Domble VD. Clinicopathological analysis of polypoid lesions of cervix. J Evol Med Dent Sci 2013;2(15):2563-70.
10. Rosai J. Female reproductive system - Vagina. In Rosai J. Rosai and Ackerman's Surgical Pathology,10th edn:Mosby(Elsevier);2011.pp.1428.
11. Nucci MR, Young RH, Fletcher CD. Cellular pseudosarcomatous fibroepithelial stromal polyps of the lower female genital tract : an under recognized lesion often misdiagnosed as sarcoma. Am J Surg Pathol 2000;24(2):231-40.
12. Adams T, Cuello M. Cancer of the vagina. Int J Gynecol Obstet 2018;143:14-21.
13. Villella JA, Bogner PN, Jani Sait SN, Block AM, Lele S. Rhabdomyosarcoma of the cervix in sisters with review of the literature. Gynecol Oncol 2005;99:742-8.
14. Conces MR, Williamson SR, Montironi R, Lopez Beltran A, Scarpelli M, Cheng L. Urethral caruncle : clinicopathologic features of 41 cases. Hum Pathol 2012;43:1400-4.
15. AbdullGaffar B, Keloth TR, Raman LG, Mahmood S, Almulla A, AlMarzouqi M, *et al*. Unusual benign polypoid and papular neoplasms and tumor-like lesions of the vulva. Ann Diagn Pathol 2014;18(2):63-70.
16. Mihm LM, Quick VA, Brumfield JA, Connors AF, Finnerty JJ. The accuracy of endometrial biopsy and saline sonohysterography in the determination of the cause of abnormal uterine bleeding. Am J Obstet Gynecol 2002;186:858-60.
17. Salim S, Won H, NesbittHawes E, Campbell N, Abbott J. Diagnosis and management of endometrial polyps: a critical review of the literature. J Minim Invasive Gynecol. 2011;18(5):569-81.
18. Nair V, Nigam JS, Bharti JN . Giant endometrial polyp in a postmenopausal woman. Cureus 2021;13(1):12789