

A Retrospective Analysis of Gynaecological Polyps at a Tertiary Care Hospital in Karachi

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ABSTRACT

Objectives: To analyze the spectrum of various histological types of the gynaecological polyps in a tertiary care hospital in Karachi and to identify prevalent age group as well as the common anatomical location of these polyps.

Methodology: This retrospective study was carried out on all histopathologically proven cases of gynaecological polyps received in Pathology Department, Basic Medical Sciences Institute, Jinnah Postgraduate Medical Centre, Karachi, between January 1, 2016 to December 31, 2017. The prevalence of various types of polyps was analyzed in simple frequencies, and prevalence of each histological type of the polyps was calculated according to the age and their common anatomical location.

Results: Mean age of the patients was 41.80 ± 11.87 years and most of the cases (40.96%) were in the fourth decade, followed by fifth (25.5%) and third (15.6%) decades respectively. Frequently encountered polyps were endometrial (33; 39.7%), followed by inflammatory (28; 33.7%), leiomyomatous (12; 14.45%), and adenomyomatous polyps (07; 8.4%) respectively. Only a single fibroepithelial polyp was found. Two polyps (2.4%) were identified as atypical polypoidal lesions.

Conclusion: Gynaecological polyps were common in fourth decade. Most of the polyps were located in the endometrium followed by the endocervix. Only two of the polypoidal lesions exhibited atypical morphology.

Key words: Gynaecological polyps, endometrial polyps, endocervical polyps, adenomyomatous polyps, leiomyomatous polyp, fibroepithelial

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کراچی میں تیسرے درجے کے اعلیٰ ہسپتال میں جینیاتی پولپس کا پچھلے حالات کا تجزیہ

مقصد: کراچی میں ایک ہسپتال میں جینیاتی پولپس کے مختلف حیاتیاتی اقسام کی اپیکٹرم کا تجزیہ کرنا اور زیادہ تر مریضوں کی عمر کے گروپ کے ساتھ ساتھ ان پولپس کے عام جسمانی مقام کی شناخت کرنا۔

طریقہ کار: یہ پچھلے حالات کا مطالعہ پہلی جنوری 2016 سے اکتیس دسمبر، 2017 کے درمیان پیتھالوجی ڈیپارٹمنٹ کے بنیادی میڈیکل سائنس انسٹیٹیوٹ، جناح پوسٹ گریجویٹ میڈیکل سینٹر، کراچی میں حاصل ہونے والی جینیاتی پولپس کے تمام ہسٹولوجیکل ثابت کیسز پر کیا گیا۔

نتیجہ: اس تحقیق میں مریضوں کی عمر 41.80 سے 11.87 سال کے درمیان تھی اور زیادہ تر مریضوں کی چوتھی دہائی میں تھی، اس کے علاوہ بالترتیب پانچویں اور تیسری دہائیوں میں بھی تھے۔ اکثر متضاد پولپس اینڈومیومیٹریل تھے (33; 39.7%)، اس کے بعد سوزش (28; 33.7%)، leiomyomatous (12; 14.45%) اور adenomyomatous پولپس (07; 8.4%) بالترتیب صرف ایک فراہمی تھیلیاں پولپ پایا گیا تھا۔ نتیجہ: تحقیق میں یہ بات سامنے آئی کہ چوتھی دہائی میں جینیاتی پولپ عام تھے۔ سب سے زیادہ پولپس اینڈومیومیٹریل میں واقع تھے اور اس کے بعد endocervix میں۔

INTRODUCTION

Around the world, abnormal uterine bleeding is a frequently encountered gynaecological complaint in females of all ages¹. The International Federation of Gynaecology and Obstetrics (FIGO) has introduced a simple and uniform classification system PALM-COEIN (polyp; adenomyosis; leiomyoma; malignancy and hyperplasia; coagulopathy; ovulatory dysfunction; endometrial; iatrogenic; and not yet classified) for precise treatment and to correlate clinical and scientific

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parameters². The polyps of endometrium are a frequent gynaecological problem with incidence varying from 7.8%-34.9% respectively. Endometrial polyps are localized hyperplastic stromal growths of endometrium covered by epithelium. Generally, these polyps are benign but, occasionally may exhibit premalignant, malignant and/or metastatic disease^{3,4}. The polyps arising from uterine cervix result from hyperplasia of endocervical columnar epithelial cells and are usually associated with inflammation. Endocervical polyps are also referred to as inflammatory polyps and affect approximately 2-5% of the female population⁵. Uterine leiomyomas are the most frequently encountered benign neoplasms, attributing 30% of females with abnormal uterine bleeding⁶. A rare entity referred to as adenomyomatous polyps contributes for only about 1.3% of all endometrial polyps and predominantly contains smooth muscle component covered with epithelium⁷. The present study was conducted to analyze the spectrum of various histological types of gynaecological polyps in a tertiary care hospital in Karachi and to identify the prevalent age group as well as the common anatomical location of these polyps.

METHODOLOGY

This retrospective study was carried out in the Department of Pathology, Basic Medical Sciences Institute, Jinnah Postgraduate Medical Centre, Karachi from January 1, 2016 to December 31, 2017. The study included all histopathologically proven (n=83) cases of gynaecological polyps received at the pathology department. The specimens were retrieved and re-analyzed for the morphological typing according to the FIGO PALM-COEIN classification system. The demographical values were collected from the records. Data analysis was performed by SPSS windows version 22. Frequencies of various gynaecological polyps were calculated in percentages, and the prevalent age groups were identified. Moreover, the prevalence of each histological type of the polyps was calculated according to the age and the anatomical location. Results were expressed in terms of charts and tabulations.

RESULTS

A total of 83 gynaecological polyps were received during the above-mentioned duration. The mean age of the patients in present study was 41.80 ± 11.87 years.

Among the age groups, the maximum number (40.96%) belonged to the fourth decade, followed by fifth (25.5%), third (15.6%), and seventh (8.4%) decades respectively. Figure 1 shows the age distribution of the included subjects.

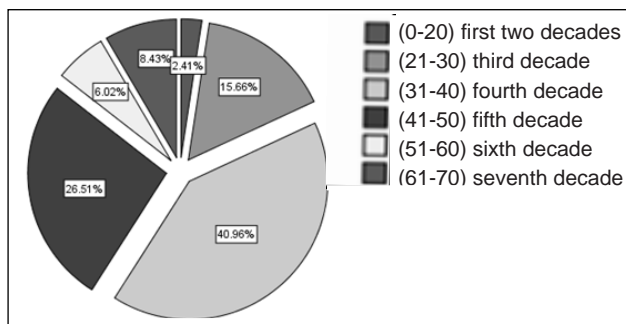


Figure 1: Age Distribution of the Included Subjects

Table 1: Frequency of Various Gynaecological Polypoidal Lesions (N=83)

Types of Polyps	No. of Polyps	%
Inflammatory Polyps	28	33.7
Endometrial Polyps	33	39.7
Leiomyomatous Polyps	12	14.45
Adenomyomatous Polyps	07	8.4
Fibroepithelial Polyps	01	1.21
Atypical Polypoidal Lesions	02	2.4
Total	83	100

Out of 83 polypoidal lesions, the highest values 33 (39.7%) were of endometrial polyps followed by 28 (33.7%) polyps of inflammatory type, 12 (14.45%) leiomyomatous and 07 (8.4%) adenomyomatous polyps respectively. There was only one (01) fibroepithelial polyp found in this study. In present study, two cases (2.4%) were found to have atypical lining, and were identified as atypical polypoidal lesions. Table 1 shows the frequency of histological types of gynaecological polyps.

We also assessed the prevalence of histological types of the polyps with the patient's age (Table 2). The frequency of the endometrial polyp was significantly higher among participants in fourth decade (13.2%) of life, followed by those in fifth (10.8%) and seventh decades (7.2%) respectively. The inflammatory polyps were common in fourth decade (15.6%), followed by third (8.4%) and fifth decades (7.22%) respectively. Fourth decade was also common for leiomyomatous polyps (8.4%), however the frequency of adenomyomatous polyps was high among fifth decade (3.36%) followed by 2.4% cases in fourth decade respectively. The only case of fibroepithelial polyp belonged to a participant in the third decade of life. Out of the two atypical polyps, one polyp was seen in fourth decade while the other was in sixth decade.

The anatomical location and histological type of the polyps were also assessed in the study (Table 3). In the current study, all endometrial polyps (39.7%) were

Table 2: Distribution of Gynaecological Polyps According to the Age (N=83)

Age in Years	Types of Polyps N (%)					
	Inflammatory Polyps	Endometrial Polyps	Leiomyomatous Polyps	Adenomyomatous Polyps	Fibroepithelial Polyps	Atypical Polyp
<20	01 (1.21)	01 (1.21)	00	00	00	00
21-30	7(8.4)	3 (3.6)	1 (1.21)	1 (1.21)	1 (1.21)	00
31-40	13(15.6)	11 (13.2)	7 (8.4)	2 (2.4)	00	01 (1.21)
41-50	6 (7.22)	9 (10.8)	4 (4.8)	3 (3.6)	00	00
51-60	01 (1.21)	3 (3.6)	00	00	00	01 (1.21)
61-70	00	6 (7.2)	00	01 (1.21)	00	00
Total	28 (33.7)	33 (39.7)	12 (14.45)	7 (8.4)	01 (1.21)	2 (2.4)

Table 3: Frequency of Gynaecological Polyps According to the Anatomical Location (N=83)

Type of Polyp	Anatomical Site of Polyp N (%)			
	Endocervix	Endometrium	Vulva/vagina	Total
Inflammatory Polyps	26 (31.3)	2 (2.4)	00	28 (33.7)
Endometrial Polyps	00	33 (39.7)	00	33 (39.7)
Leiomyomatous Polyps	04 (4.81)	8 (9.63)	00	12 (14.45)
Adenomyomatous Polyps	01 (1.21)	06 (7.22)	00	7 (8.4)
Fibroepithelial Polyps	00	00	01 (1.21)	01 (1.21)
Atypical Polypoidal Lesions	01 (1.21)	01 (1.21)	00	02 (2.4)
Total	32 (28.55)	50 (60.24)	01 (1.21)	83 (100)

located within the uterine cavity. Most of the inflammatory polyps (26; 31.3%) arose from the endocervix, while only 02 (2.4%) were derived from endometrium. Amongst the twelve leiomyomatous polyps, majority (9.63%) had originated from uterine corpus while 4.81% arose from the uterine cervix. Almost all adenomyomatous polyps were placed within the uterine cavity and only one (1.21%) had endocervical origins. The only case of fibroepithelial polyp had originated in vulva. One of the atypical polyps was identified as endocervical atypical polyp whereas the other had an atypical endometrial lining.

DISCUSSION

Genital tract polyps are a common gynaecological problem. They are a known cause of menorrhagia in women. Other common causes include leiomyoma and adenomyosis⁸. Female genital tract polyps are frequently reported in endometrial and cervical biopsies. They are also incidentally found in hysterectomy specimens. The current study was aimed at observing the spectrum of female genital tract polyps and their association with site and different age groups.

The mean age of the subjects of the study was 41.80 ± 11.87 year. This is comparable to 37 years of mean age reported by Barati, Masihi, and Ilkhan in an Iranian study.⁹ Age range recorded was 19-70 years in the present study. Dreisler *et al.* in their study also reported

a similar age range of 20-74 years. Maximum number of polypoidal lesions presented between 31-40 years age group in the current study. This finding is supported by a study of Dreisler *et al.* which showed maximum number of cases above the age of 30 years.¹⁰ Furthermore, in the present study, only two cases, one each of endometrial and inflammatory polyp, were noted in less than 20 years age group. This finding suggests that prevalence of gynaecological polyps increases with age. To our knowledge, none of the studies observed polypoidal lesions of female genital tract in the second decade.

In the current study, endometrial polyps from uterine corpus were recorded in majority 50 (60.2%). This finding is comparable to a study conducted at Aga Khan University Hospital (AKUH) which reported 42.7% endometrial polyps. This slight discordance in findings may be due to inclusion of benign as well as malignant cases in their study. Endometrial polyps are mucosal outgrowths comprising endometrial glands and stroma. It is critical to identify the histological subtype of endometrial polyps because on ultrasound, they may occasionally give an impression of endometrial hyperplasia or frank malignancy.¹¹ Cervical polyps constituted 32 (28.5%) cases in the current series. This is supported by an Iranian study of Barati, Masihi, and Ilkhan which recorded 34.7% endocervical polyps.^{9,12}

It has been reported that occasionally lesions like leiomyoma and adenomyoma of uterus can give rise to a polypoidal lesion within the endometrial cavity. On gross examination, they may mimic endometrial polyp. Biopsy is essential to identify the morphological subtype of polypoidal lesions. In the present study, out of 83 cases, 12 (14.4%) were leiomyomatous polyps. A Danish study agrees with this finding by observing 13% of these lesions. Adenomyomatous polyps represented 07 (8.4%) cases in our study. This is comparable with a study by Sheth, Hamper, and Kurman which recorded 2.85% cases. This difference may be due to inclusion of only postmenopausal women in their study^{10,11,14}.

Inflammatory polyps constituted 28 (33.7%) cases in the current series. A study by Filomena *et al.* observed the association of endometritis (inflammation) with endometrial polyps. This study recorded a comparable number of 27.4% of inflammatory polyps. It also analyzed the possible association of vascular changes with inflamed endometrium¹⁴. This result suggests that a significant number of endometrial polyps develop in the background of inflammation.

Atypical polypoidal lesions were recorded in only 02 (2.4%) cases in the present study. This observation is supported by a Danish study which recorded 1.5% polypoidal lesions with atypical changes. Similarly, Pujani *et al.* agrees with our finding by reporting 2.2% of atypical lesions in their series. This fact highlights that the risk of malignancy is low in uterine polypoidal lesions. Only 01 (1.21%) case of fibroepithelial polyp was diagnosed in the vulval/vaginal region in the current study. In literature, this entity has been reported as a benign and rare subtype of polyps of this region^{10,11,15}.

It is important to accurately diagnose the histopathological types of polypoidal lesions on endometrial and cervical curettings. Correlation with clinical history is helpful in majority of cases. Various treatment modalities including non-surgical methods as well as minor procedures like polypectomy, myomectomy, or surgical ablation are available¹⁶. Correct diagnosis on small biopsies may prevent the burden of unnecessary hysterectomies in females of reproductive age group.

Further detailed studies with more defined criteria should be conducted to establish a clear association between the age groups and the subtype of polyps and also to rule out any premalignant or malignant transformation within the polypoidal lesion in females.

Limitation of study: This study is a uni-centred analysis and does not reflect the prevalence of population.

CONCLUSION

The study concludes that gynaecological polyps are common in fourth decade. Endometrial polyps are the most common histological type followed by inflammatory polyps. Majority of the polyps arise from uterine corpus and subsequently from the uterine cervix. Most of the gynaecological polyps are benign, however, only two lesions exhibited atypical morphology in present study.

Conflict of interest: The authors declare no conflict of interest for this study.

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Tables

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Type or print each table with double spacing on a separate sheet of paper. Number tables consecutively in the order of their first citation in the text and supply a brief title for each. Do not use internal horizontal or vertical lines. Give each column a short or abbreviated heading. Authors should place explanatory matter in footnotes, not in the heading. Explain in footnotes all nonstandard abbreviations. For footnotes use the following symbols, in sequence:

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