

Case Report

Choristomatous Endocervical Polyp with Heterologous Adipose Tissue

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ABSTRACT

Endocervical polyps are a common occurrence in the postmenopausal age group and many reports have described the presence of heterologous elements in the stroma of such polyps. The presence of mature adipose tissue in the stroma has been hypothesized to be arising from the perivascular fat or metaplastic transformation of the smooth muscle cells posttrauma. A 75-year-old female presented with spotting per vagina. Colposcopic examination revealed an endocervical polyp which was excised. Microscopic examination showed an ulcerated epithelium with metaplastic changes along with sheets of mature adipose tissue with focal S100 positivity conferring a diagnosis of choristomatous endocervical polyp with heterologous adipose tissue. The primary clinical concern of a malignant cause in this age group is alleviated by the diagnosis of this rare benign entity. Only three such cases have been reported in the English literature so far, and the present case accounts for the fourth such case.

KEYWORDS: Adipose tissue, choristoma, endocervical polyp, metaplasia, S100

INTRODUCTION

Endocervical polyp (ECP) is a benign exophytic lesion arising from the endocervix. It is lined by the endocervical type of epithelium and frequently shows metaplastic squamous changes. Other frequent changes seen include chronic inflammation, surface erosions, and reactive cellular atypia. They can be seen in any age group, however are more common in multiparous women of age >40 years. The cervical stroma is composed predominantly of fibrocollagenous tissue, smooth muscle, vessels, and lymphatics. Myocervical adipose tissue is rare and is thought to arise from perivascular fat or through transformation of the smooth muscle.^[1] The latter was attributed to a metaplastic process following a prior surgical procedure.^[2] A similar pathogenesis is suggested for choristoma of the uterine cervix. There have been varied case reports of heterologous mesenchymal elements occurring in the ECP. A thorough literature search showed only three described cases of ECP with mature adipose tissue differentiation.^[3-5] The present case describes heterologous adipose tissue in the ECP in a 75-year-old multiparous female and outlines the differential diagnosis and diagnostic dilemmas.

CASE REPORT

A 75-year-old female presented to the gynecology outpatient department with complaint of spotting per vaginam. She attained menopause 20 years back and has seven living children. There was no other significant medical/surgical history. A colposcopic examination revealed a cervical polyp arising from the posterior wall and protruding through the external os. Polypectomy was performed and submitted for pathological evaluation. Gross examination showed a grey-white polypoidal tissue measuring 2.8 cm × 2 cm × 1.5 cm; the polyp was bisected and entirely submitted for histopathological examination. Microscopic sections showed an ulcerated epithelium with foci of squamous metaplasia and the stroma predominantly composed of mature adipose tissue with scattered endocervical glands. Interspersed small capillaries were noted with the adipose tissue [Figure 1 and 2a]. The basal region showed large thick-walled congested vessels. No

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cellular atypia/mitosis/other heterologous elements were noted. Masson's trichrome stain did not show any smooth muscle differentiation [Figure 2b]. A diagnosis of choristomatous ECP with heterologous adipose tissue was rendered based on immunohistochemical examination as the tumor was α -smooth muscle actin (SMA) negative and S100 being positive focally.

DISCUSSION

ECP is a result of hyperplastic changes seen in the epithelium as well as the cervical stroma. It is considered to be a benign lesion consisting of loose edematous stroma with scattered blood vessels along with benign endocervical glands. Larger lesions may sometimes present with chronic inflammation due to irritation or erosion.^[1,2]

The polyp mentioned in our report differs from the usual endocervical polyp in absence of endocervical glands and presence of abundant mature adipose tissue. The presence of mature heterotopic benign mature adipose is scarce in the English literature, and only three cases have been reported till date.^[3-5]

Many theories have been described in the literature stating the reasons for the presence of adipose tissue in the cervix. The most common theory among them is origin of adipose tissue from the misplaced embryonic cells and as a result of metaplastic changes in the smooth muscle or connective tissue cells.^[6] Although later in 2009, Adriana *et al.* described the presence of this mature adipose tissue as a normal constituent of the uterine cervical stroma, which may be identified in up to 15% of the excision specimen.^[2] They also described the poor reaction with S100 antibody, as in our case. However, they failed to describe the history of any possible medical intervention using injectable lidocaine-based anesthesia which can resemble fat on H- and E-stained sections.^[4]

The present case has no history of any trauma or medical intervention. The patient's obstetric history was uneventful, with all children born with no surgical intervention without any complications. Therefore,

hamartoma is ruled out in the present case scenario. However, the presence of cartilage and mesonephric gland-like structure along with mature adipose tissue cannot qualify the prerequisite for labeling the patient with ECP with heterologous fatty tissue;^[1] rather, these entities should be clubbed into lipoadenofibroma.^[7] The present case shows the presence of mature adipose tissue, lacking other epithelial or mesenchymal components.

The second most common popular hypothesis of metaplastic transformation from the smooth muscle cells in the cervix should also be explored. Pecorella *et al.*^[4] described choristomatous lipid tissue in the uterine cervix by demonstrating negative SMA on IHC in them, which is also seen in the present case report.

To date, all the reported cases in the literature were seen in younger age group. The present case of ECP with heterologous lipid tissue is thus the first one to be reported in an elderly patient.

The present case fulfills all the required criteria for a "choristomatous uterine cervical polyp" in accordance with the available literature and definition proposed by de Lima *et al.*^[3]

CONCLUSION

The present case of a choristomatous ECP in a 72-year-old otherwise healthy female is the fourth reported case in the literature. This case could be an eye-opener to the practicing histopathologists about the presence of choristomatous adipose tissue in an endocervical polyp. More comforting is the absolute benign nature of this disease should be considered after ruling out more common malignant mimickers such as carcinosarcoma and adenosarcoma.

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Conflicts of interest

There are no conflicts of interest.

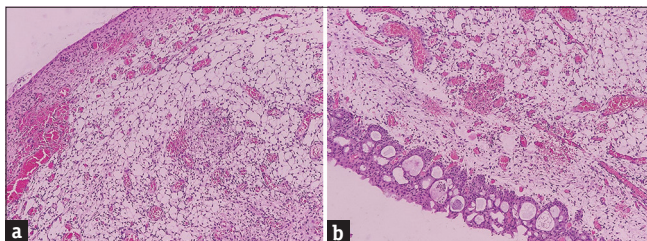


Figure 1: Endocervical polyp with surface ulceration (a) and metaplastic squamous change (b) with stroma showing sheets of mature adipose tissue, interspersed small congested vessels, and few lymphocytes

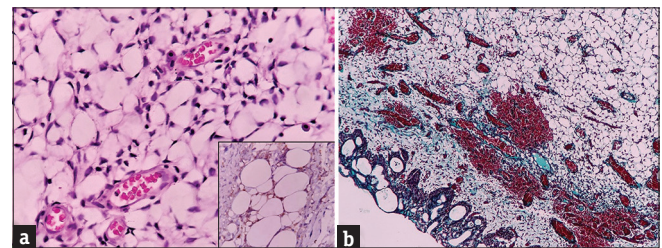


Figure 2: (a) The stromal adipocytes show a characteristic morphology of mature cells and are focal positive for S100 (inset) (H and E, $\times 400$). (b) Masson's trichrome stain did not show any smooth muscle differentiation (MT, $\times 100$)

REFERENCES

1. Ilhan R, Yavuz E, Iplikçi A, Tuzlali S. Hamartomatous endocervical polyp with heterologous mesenchymal tissue. *Pathol Int* 2001;51:305-7.
2. Doldan A, Otis CN, Pantanowitz L. Adipose tissue: A normal constituent of the uterine cervical stroma. *Int J Gynecol Pathol* 2009;28:396-400.
3. de Lima MA, Pertence AP, de Souza MA. Heterotopic adipose tissue in the uterine cervix. *Rev Hosp Clin Fac Med Sao Paulo* 1998;53:149-51.
4. Pecorella I, Monti M, Dei Malatesta MLF, Ciardi G. Polyp of the uterine cervix with heterologous fatty tissue. *Indian J Pathol Microbiol* 2018;61:593-5.
5. Komforti MK, Whitney K, Chung S. Benign endocervical polyp with heterologous elements in a 42-year-old female: Report of a case. *Cureus* 2019;11:e6045.
6. Hinge A, Kher M, Kherdekar M. Lipoma of corpus and cervix uteri. Report of three cases with review of literature. *Obs Gynaecol India* 1975;. Available from: <https://www.jogi.co.in/articles/view.php?id=MjE5OA==> [cited 2020 Apr 4].
7. Horie Y, Ikawa S, Kadowaki K, Minagawa Y, Kigawa J, Terakawa N. Lipoadenofibroma of the uterine corpus. Report of a new variant of adenofibroma (benign müllerian mixed tumor). *Arch Pathol Lab Med* 1995;119:274-6.