

# A rare occurrence primary adenomyoma of the fallopian tube—incidental finding of a tumor

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## ABSTRACT

Adenomyoma of the fallopian tube is a rare entity. We report a rare case of adenomyoma localized only in the left fallopian tube in a 38-year-old woman, who was presented with dysfunctional uterine bleeding. Patient underwent hysterectomy, and on gross examination, there was a well-circumscribed and well-encapsulated tumor arising from the left fallopian tube. Postoperative histopathology showed that the tumor comprised of circumscribed nodular aggregates of smooth muscle along with endometrial glands, accompanied with endometrial stroma. The case was diagnosed as primary adenomyoma of the left fallopian tube.

**Key words:** Adenomyoma, extrauterine, fallopian tube

## INTRODUCTION

Adenomyoma of the uterus is a well-documented tumor comprising of smooth muscle bundles, endometrial glands along with the stroma. However, extrauterine adenomyomas are rare.<sup>[1-3]</sup> Even more exceptional are those occurring in the fallopian tube.<sup>[3]</sup> We report a case of extrauterine adenomyoma of the fallopian tube that was an incidentally detected in the hysterectomy specimen of a 38-year-old female. This report documents only the second case of adenomyoma arising from the fallopian tube.<sup>[3]</sup>

## CASE REPORT

A 38-year-old female underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy for dysfunctional uterine bleeding. Preoperatively, a growth measuring 4 cm × 3 cm was detected arising from the distal portion of the left fallopian tube. On gross examination, a well-circumscribed, well-encapsulated mass measuring 4 cm × 3 cm × 1 cm was arising from the distal end of

the left fallopian tube. Cut section of the mass showed homogeneously yellow, lobulated appearance. Lumen of the distal end of the fallopian tube was stenosed. On microscopic examination of the mass, there were sweeping fascicles of smooth muscle and cystically dilated endometrial glands, at places surrounded by endometrial stroma [Figure 1].

## DISCUSSION

Adenomyomas, benign tumors composed of smooth muscle, and non-neoplastic endometrium, typically originate within the uterus. An extrauterine adenomyoma is a rare entity.<sup>[1,2]</sup> Extra-uterine adenomyomas may arise from broad ligament, fallopian tube or ovary. Though, there are a few recorded cases of fibroma and fibromyoma of the fallopian tube in the literature, adenomyoma arising from the fallopian tube is extremely rare.<sup>[3]</sup>

It is unclear whether such lesions represent foci of endometriosis within marked smooth muscle hyperplasia, uterus like mass lesions or leiomyomas with entrapped endometriotic glandular and stromal elements. They are distinguished from adenomyosis by their sharp demarcation from the surrounding normal tissues, and from leiomyomas by the presence of intrinsic glandular and stromal elements. The diagnosis of uterine adenomyoma is usually straightforward, but occasional cases create diagnostic difficulty, and malignancies of epithelial or mesenchymal origin may be considered.<sup>[4]</sup>

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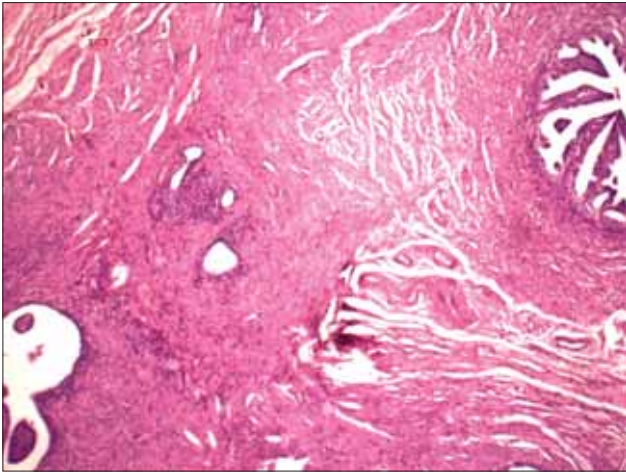
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**Figure 1:** Photomicrograph showing smooth muscle bundles, endometrial glands along with stroma (H and E, x20)

Two theories have been offered to explain the etiology of the uterus-like mass: The müllerian duct fusion defect theory and the subcoelomic mesenchyme transformation theory. Pueblitz-Perdeo *et al.*,<sup>[5]</sup> and Rosai<sup>[6]</sup> postulated that these uterine-like masses result from a müllerian duct fusion defect. The müllerian duct fusion defect theory is based on a developmental abnormality occurring during the formation of the female genital tract. Initially, male and female embryos have two pairs of genital ducts: Wolffian (mesonephric) and müllerian (paramesonephric). Lack of fusion of the müllerian ducts in a localized area, or throughout the length of the ducts, may explain various duplications or atresias of the uterus.<sup>[7]</sup> The subcoelomic mesenchyme transformation theory challenges the müllerian fusion defect theory. The subcoelomic mesenchyme or secondary müllerian system is defined as the layer of tissue that lies underneath the mesothelial surface of the peritoneum. In the primitive pelvic coelom, this layer of tissue gives rise to the mesenchyme of the urogenital ridge that surrounds the early müllerian and wolffian ducts.<sup>[7]</sup> In the adult, the subcoelomic mesenchyme is represented by an inconspicuous layer of flattened cells that blend imperceptibly into the subserosal stroma of the uterus, ovaries, tubes, and uterine ligaments. Proliferation of the sub adjacent mesenchyme may give

rise to mesenchymal lesions composed of endometrial stromal-type cells, decidua, or smooth muscle.<sup>[8-10]</sup>

In this case, it is unlikely that the patient had a structural uterine abnormality consistent with a müllerian fusion defect, because she had a normal uterus, cervix, fallopian tubes, ovaries, and was also without any renal abnormality. It is most likely that this extrauterine adenomyoma/uterus-like mass of the fallopian tube arose from the tissues of the secondary müllerian system, which was derived from the subcoelomic mesenchyme.

## REFERENCES

1. Choudhrie L, Mahajan NN, Solomon MV, Thomas A, Kale AJ, Mahajan K. Ovarian ligament adenomyoma: A case report. *Acta Chir Belg* 2007;107:84-5.
2. Redman R, Wilkinson EJ, Massoll NA. Uterine-like mass with features of an extrauterine adenomyoma presenting 22 years after total abdominal hysterectomy-bilateral salpingo-oophorectomy: A case report and review of the literature. *Archi Pathol Lab Med* 2005;129:1041-3.
3. Etoh T, Watanabe Y, Imaoka I, Murakami T, Hoshiai H. Primary adenomyoma of the fallopian tube mimicking tubal malignant tumor. *J Obstet Gynaecol Res* 2012;38:721-3.
4. Ohta Y, Suzuki T, Shiokawa A, Ota H. A case of uterine adenomyoma with bizarre smooth muscle cells mimicking leiomyosarcoma. *Diagn Cytopathol* 2005;32:288-91.
5. Pueblitz-Peredo S, Luévano-Flores E, Rincón-Taracena R, Ochoa-Carrillo FJ. Uterus-like mass of the ovary: Endometriosis or congenital malformation? *Arch Pathol Lab Med* 1985;109:361-4.
6. Rosai J. Uterus like mass replacing ovary. *Arch Pathol Lab Med* 1982;106:364.
7. Sadler TW. *Langman's Medical Embryology*. 6<sup>th</sup> ed. Baltimore: Lippincott Williams & Wilkins; 1990. p. 270-83.
8. Lauchlan SC. The secondary Müllerian system. *Obstet Gynaecol Surv* 1972;27:133-46.
9. Rholting MB, Kao KJ, Woodard BH. Endometriosis: Possible association with leiomyomatosis disseminata and endometriosis. *Arch Pathol Lab Med* 1981;105:556-7.
10. Scully RE. Smooth muscle differentiation in genital tract disorders. *Arch Pathol Lab Med* 1981;105:505-7.

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