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Lipoma of the fallopian tube

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Background: Lipoma is a very common benign tumor, occurring throughout the whole body, however, its incidence in the fallopian tube is extremely rare.
Case: We report a case of fallopian tube lipoma that was found incidentally during abdominal hysterectomy performed due to prolapsed uterus in a 78-year-old woman.
Conclusion: We emphasize the rarity and the importance of histological confirmation of lipoma of the fallopian tube.
Key words: Lipoma, fallopian tube, tumor

Introduction

Primary benign tumors of the fallopian tube are rare. Although lipoma is a very common benign tumor occurring throughout the whole body, its occurrence in the fallopian tube is extremely rare.[1–5] Fallopian tube is an unusual location for lipoma. They are brought to the attention of the obstetrician only if they reach a large size or cause a complication.

Case

A 78-year-old multiparous woman was admitted to the Department of Obstetrics&Gynecology of Pamukkale University, School of Medicine, presenting with postmenopausal bleeding and pelvic pain during the last 6 months. Gynecologic examination revealed total prolapsus uteri, otherwise the physical examination was normal. The past medical history was unremarkable. At laparotomy, a yellowish and well-circumscribed soft mass measuring up to 2 cm in greatest dimension was found attached to the serosa of the right fallopian tube. The left tuba-ovary was normal and there were no adhesions of omentum to the fallopian tube at the surgery. Total abdominal hysterectomy and bilateral salpingo-oophorectomy were performed and postoperative recovery of the patient was uneventful.

The uterus with attached cervix measured 7x5x3 cm and weighed 96 g. The specimen demonstrated an encapsulated soft nodular mass measuring 2 cm with a smooth and intact outer surface and attached to the serosal surface along the fimbriated portion of the fallopian tube (Fig 1). The cut surface revealed yellowish fatty and homogeneously solid appearance. No hemorrhage or necrosis was observed. The specimen was fixed in 10% neutral formalin. The paraffin-embedded tissue sections were stained with haematoxylin and eosin.

Histologically, the tumor was composed entirely of mature adipocytes with large fat spaces and minor vascular component (Fig 2). There was no evidence of malignant change or tubal wall invasion. The diagnosis was lipoma of the fallopian tube. Histopathologic examination of the ovaries and endometrium revealed corpus albicans, inclusion cysts and atrophic endometrium, respectively.

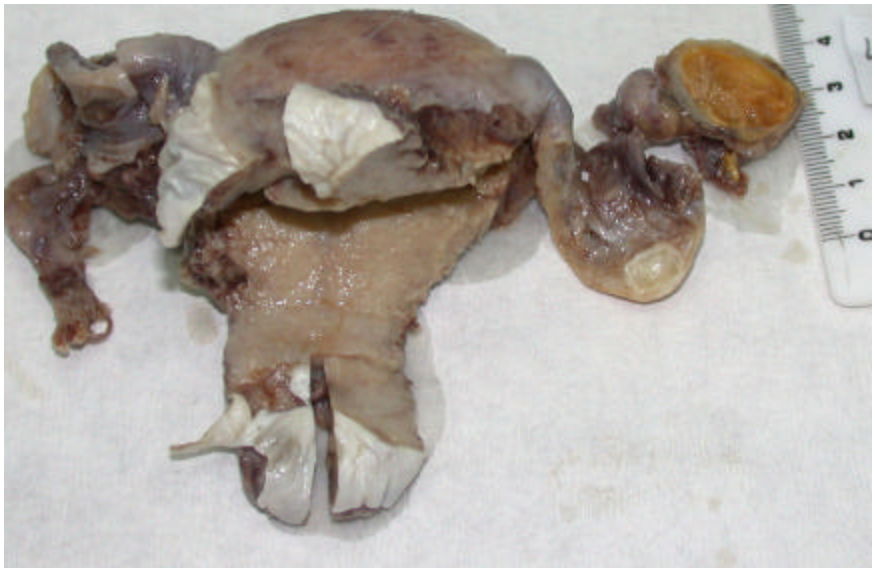

Figure 1. Lipoma attached to the subserosa of the fallopian tube.

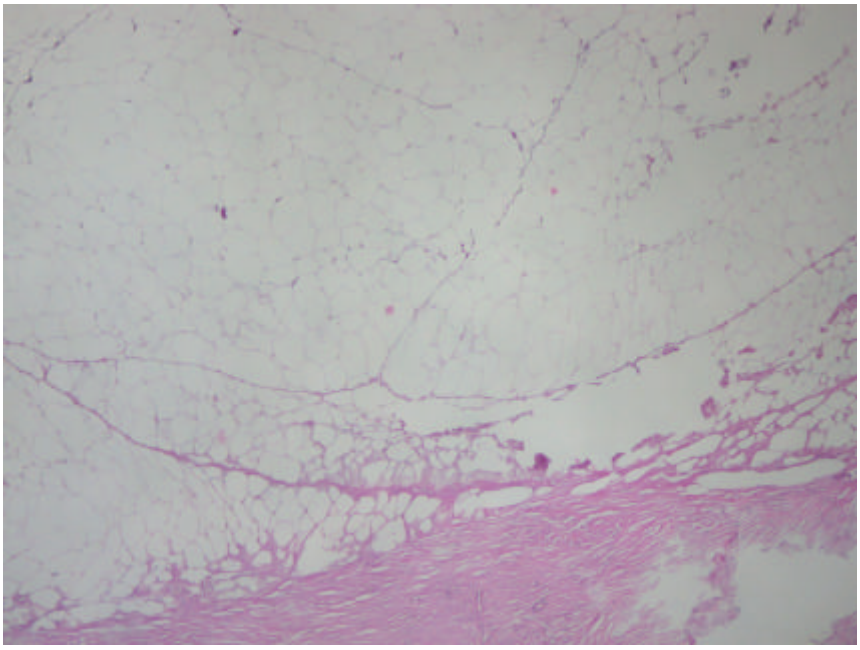

Figure 2. Section of the lipoma showing mature adipose tissue (H&E, X10).

Conclusion

Although the fallopian tube is a common site of metastatic spread, both primary benign and malignant tumors of the fallopian tube are very rare. The benign tubal neoplasms include adenomatoid tumor, lipoma, leiomyoma, teratoma, fibroma, hemangioma, and lymphangioma, and most of them are of mesodermal origin.[1–5] In spite of being the most frequent tumor in this location, together with adenomatoid tumor, lipoma of the fallopian tube is a very rare entity and their precise incidence is unknown. We think that most tumors remain undetected or unreported.

The etiology is unknown but linked to a constitutional factors and obesity. Its presentation is more frequent in the fifth or sixth decade of life. It is usually presented with an asymptomatic tumor, usually unilateral, showing a swift growth to masses larger than 10 cm.

The origin of the lipomatous tumors in the genitourinary tract is not clear. The uterine tubes are derived from the urogenital-ridge mesenchyme.

Similarly, the adipose tissue is derived from mesenchyme. Gardella[6] proposed that lipomatous tumors may arise from overgrowth of metaplastic fat cells in the stroma and are likely to represent a fat-rich solid teratoma of the ovary. In the literature several mechanisms have been implicated as the origin of this tumor including; embryonal cells of mesodermal origin, metaplasia of the mesenchymal tissue, the subperitoneal tissues of the fallopian tube, and embryonic misplacement of immature tissue.

Lipomas are detected as a well-circumscribed, intraluminal homogeneous mass with fat attenuation by computed tomography (CT). Recognition of fat within an organ or lesion on abdominal CT scans gives important clues to guiding a differential diagnosis.[7,8] However, radiologic evaluation of tubal benign lesions may not show diagnostic imaging characteristics.[9]

At surgery, the appearance and location of the lesion often allows a specific differential diagnosis. The microscopic appearance is identical to that of similar tumors appearing elsewhere in the body. But deep-seated lipomas tend to be less well circumscribed, largely depending on the site of origin. Distinction of large lipomas from well-differentiated liposarcomas and pelvic lipomatosis may be extremely difficult on the basis of radiologic and macroscopic evaluation. Unlike pelvic lipomatosis, lipoma is well circumscribed and do not distort the fallopian tube wall. The absence of lipoblasts, severe nuclear atypia and mitoses are helpful in ruling out liposarcoma. In the present case, the hyalinization at the edge of the lesion suggested the possibility of an infarcted appendix epiploica that became detached and stuck to the outer surface of the fallopian tube. But there were no any other intra-peritoneal adhesions and the lesion was a well-encapsulated nodular soft mass with a smooth and intact outer surface. On follow-up, five years after the surgery, our patient has been asymptomatic.

Lipoma of the fallopian tube is extremely rare. Such fatty tumors especially the large ones in the female genital tract carry the rare possibility of being liposarcomas, which further warrants their excision. Most lesions require biopsy and histopathological examination for definitive diagnosis and viable treatment.

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