Case Report / Olgu Sunumu
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Neurolipoma of the Fallopian Tube – The First Reported Case

Fallop Tüpü Nörolipomasi - Karşılaşılan İlk Olgu

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ABSTRACT

Lipomas are rarely seen in the fallopian tube localization. Neurolipoma is a variant of lipoma and contains fibroadipose tissue surrounding and infiltrating the nerves. The aim of this presentation is to discuss a case of neurolipoma with an unusual localization with the literature. In this article, a case of neurolipoma incidentally detected in the fallopian tube of a 64-year-old woman who applied with complaints of postmenopausal uterine bleeding is presented. According to our current literature knowledge, our case is the first reported case of neurolipoma in the female genital system. Considering the risk of liposarcoma in large lipomatous tumors, histopathological examination is necessary for diagnosis.
KEYWORDS: Fallopian tube, neurolipoma, pelvic masses

ÖZ

Lipomlar, fallop tüpü lokalizasyonunda nadiren görünür. Nörolipoma, lipomanın bir varyantıdır ve sinirleri çevreleyen ve onu infiltre eden fibroadipöz doku içerir. Bu sunumun amacı sıra dışı yerleşim gösteren bir nörolipoma olgusunun literatür eşliğinde tartışılmasıdır. Bu yazıda postmenopozal uterin kanama şikayetleriyle başvuran 64 yaşındaki bir kadın hastada, fallop tüpünde tesadüfen saptanan nörolipoma olgusu sunulmuştur. Güncel literatür bilgilerimize göre, olgumuz kadın genital sisteminde bildirilen ilk nörolipoma olgusudur. Büyük lipomatöz tümörlerde liposarkom riski göz önüne alındığında, histopatolojik inceleme tanı için gereklidir.
ANAHTAR KELİMELER: Fallop tüpü, nörolipoma, pelvik kitleler

INTRODUCTION

Lipomas are benign mesenchymal tumors characterized by well-defined, encapsulated lobules of mature adipocytes. While they are common and can occur throughout the body, they are rarely seen in the fallopian tube and are typically asymptomatic unless large (1). Neurolipoma, a variant of lipoma, is also known as nerve fibrolipoma, fibrolipomatous hamartoma and nerve lipomatosis (2). These tumors are typically slow-growing and often found in the hands and forearms. They are composed of proliferative fibroadipose tissue surrounding and infiltrating nerves (3,4).

CASE REPORT

A 64-year-old female presented with postmenopausal bleeding. Imaging showed an intramural leiomyom. She underwent total abdominal hysterectomy and bilateral salpingoophorectomy. (TAH+BSO). Upon histological examination, a paratubal cyst was found, along with a encapsulated lipomatous nodule measuring 1.5 x 0.7 x 0.5 cm in the fimbrial area of the left fallopian tube (Figure 1A). The lesion consisted of peripheral nerve sections, fibrous tissue separating and infiltrating between them, and mature adipocyte proliferation outside. Fibrosis appeared to be concentrically arranged around the nerve fibers (Figure 1B-D). Cytological features such as

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lipoblastic activity, fibrous proliferation, or pleomorphism of stromal cells were not observed. No mitosis was noted (Figure 1E). No findings of malignant changes or tube wall invasion were present (Figure 1F).

There was no growth in Schwann cells or hyperplasia in the endoneural parts. The case was reported as a fallopian tube neurolipoma. Histopathological examination of entire specimen revealed just chronic cervicitis, intramural leiomyoma, endometrial polyp and adenomyosis.

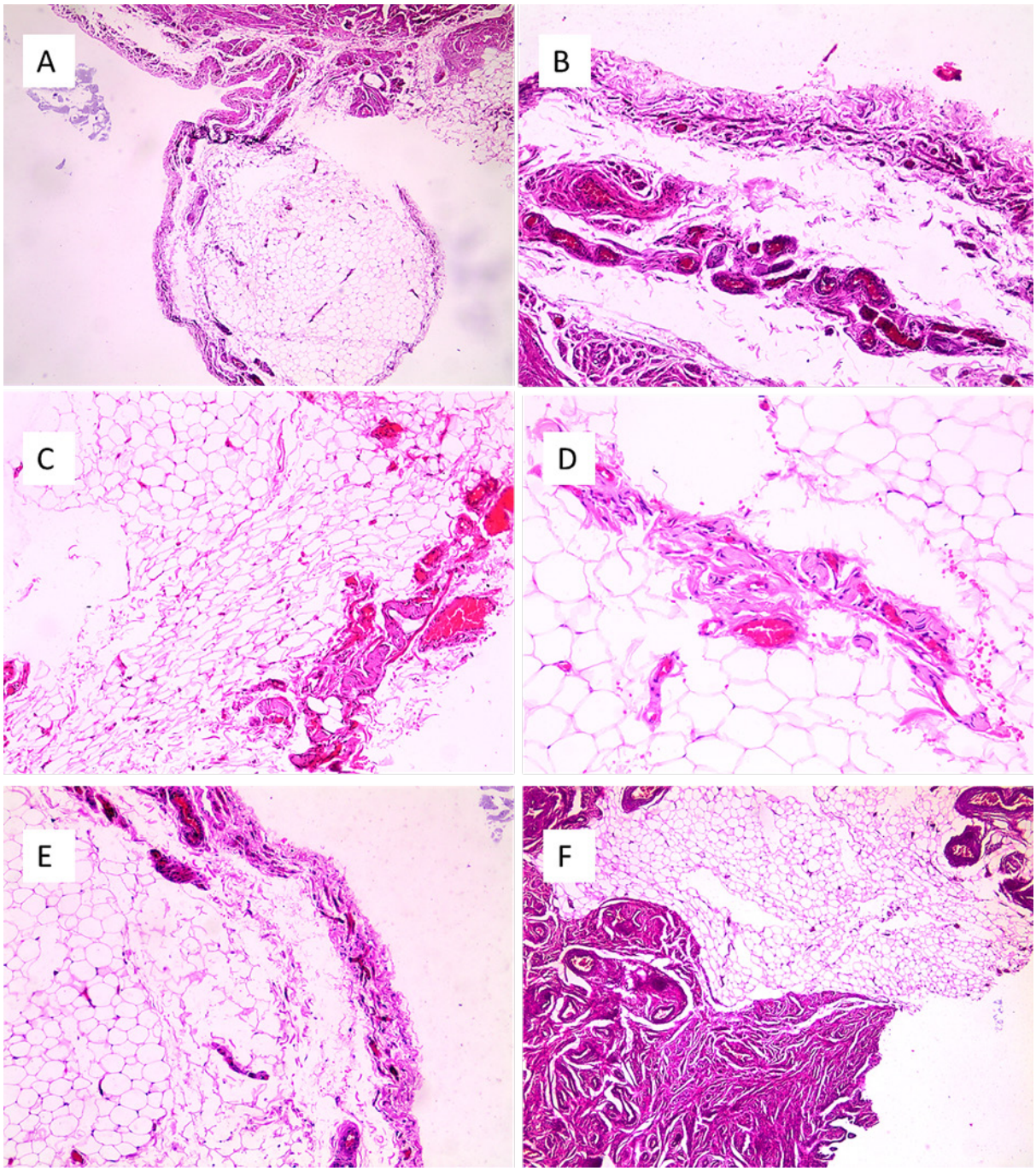

Figure 1. *A) Encapsulated lipomatous nodule, hematoxylin and eosin (H&E) x 40. B-D) Fibrous tissue arranged concentrically around nerve fibers, H&E x 200. E) No cytological features of atypical lipomatous tumors and no mitotic activity were observed, H&E x 100. F) No malignant changes or tube wall invasion were present, H&E x 100*

DISCUSSION

Lipomas are the most common benign mesenchymal tumors, typically solitary, and are found in subcutaneous fat, often in the proximal limbs. Primary neoplasms of the fallopian tube are rare, typically discovered incidentally, with isolated cases reported. Neurolipomas are masses consisting of fibro-adipose tissue surrounding and infiltrating nerves and their branches (1,2). In our case, the question arises whether the local proliferation of adipose tissue should be considered tumor-like hyperplasia or metaplasia. Adipose tissue lobules are typically found in regions like the colon, but have not been previously described in the fallopian tubes. Chronic inflammation can lead to adipose tissue proliferation, mimicking lipomas but lacking defined borders and also causing fibrous tissue growth. No intraperitoneal adhesions were observed (2,6). Neurolipomas contain fat and fibrous tissue around nerve bundles, but do not infiltrate them. Distinct thickening is observed in the perineural tissue. Unlike true lipomas, neurolipomas do not contain nerve elements (7). Neurolipomas differ from diffuse lipomatosis which affects subcutaneous tissue and muscles, secondarily affects nerves.

Neurolipomas directly affect nerves. Neurofibroma and neuroma can be differentiated from neurolipomas based on nerve elements proliferation, while neurolipomas show nerve bundle atrophy (1). The exact origin of neurolipomas in the female genital tract is unclear, but may relate to genetic factors and obesity. Fallopian tubes, like adipose tissue, are derived from mesenchyme, which could explain lipomatous tumors (6). Lipomatous tumors could result from excessive growth of metaplastic adipose cells in the stroma. The tumor observed in our case may be considered a choristoma resulting from abnormal tissue development. Heterotopic tumors can occur in organs like the adrenal glands or optic nerves (2,8). Several mechanism have been proposed regarding the origin of this tumor, including misplaced embryonic tissue (6). Large lipomatous tumors in the female genital tract carry the risk of liposarcoma, requiring excision. Histopathological examination is essential for confirming the diagnosis, differential diagnosis, and guiding treatment (6).For example, in one case, the diagnosis was confirmed by histological features such as perineural and epineural tissue infiltration of neurolipoma and fibrous tissue proliferation (9).

Ethics: Since this was a retrospective study, institutional permission was obtained for the review of patient records, but additional patient consent was not required. For all patients included in the study, informed consent forms for the previously performed surgical procedures had been obtained and were available in their hospital archives.

Etik: Çalışmanın geriye dönük olması dolayısıyla hastaların dosyaları taranmasında kurum izni alınmış olup, hastalardan ayrıca izin alınmamıştır. Çalışmaya dâhil edilen tüm hastalarda çalışma öncesinde yapılmış olan cerrahi işlem için bilgilendirilmiş onam formu alınmış olup hastane arşivindeki dosyalarında mevcuttur.

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