Case Report

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Primary Ovarian Leiomyoma

A Case Report

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Key Words

Ovary
Neoplasm
Leiomyoma

Abstract

A 32-year-old woman was admitted for termination of her 6-week pregnancy at her request. However, pelvic examination followed by transvaginal **ultra-sonography** (TVU) revealed an adnexal mass complicating pregnancy and requiring surgical intervention that was carried out after termination of pregnancy. At laparotomy, left **salpingo-oophorectomy** was performed and histologic examination revealed a leiomyoma arising primarily in the ovary.

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Introduction

Leiomyoma arising primarily in the ovary is an extremely rare tumor. However, many cases pass unrecorded [1], perhaps because ovarian leiomyomas are usually so small in size that they may be missed in routine evaluation of the surgical oophorectomy specimens [1, 2]-

We report a case of primary ovarian leiomyoma which was diagnosed after surgical intervention for adnexal mass complicating pregnancy.

Case Report

A 32-year-old woman, gravida 5, para 4, was admitted to family planning service of Dr. Zekai Tahir Burak Women's Hospital for termination of her 6-week gestation at her request. Her past history was unremarkable. Physical examination and laboratory data were normal. However, pelvic examination revealed a solid, irregular mass on the left side which could be clearly felt separate from the uterus. Although she had no complaint about the mass, she was operated on after termination of her pregnancy. At laparotomy, a solid tumor of the left ovary was detected distinctly separate from the uterus. There was no adhesion or infiltration to the surrounding structures. Left salpingo-oophorectomy was performed and frozen sectioning revealed a benign tumor at the time of operation.

The resected left ovary and adnexa were submitted for extensive sectioning and final examination. The tumor, weighing 930 g, measured 14 cm in length and 9 cm in maximum width. The tumor appeared hard except for one softened single nodule measuring 4 cm in length and 3 cm in width, near the inferior surface. The surface was smooth and shiny. On section, the tumor was mainly hard and firm and white-

gray in color but the cut surface of the tumor traversing the above-mentioned nodule revealed many small cysts which were sharply delineated from the tumor.

Sections from various portions of the tumor were prepared and stained with hematoxylin-eosin. In all sections, the tissue was composed of typical smooth muscle cells with ovoid nuclei. They formed strands and bundles arranged in the whorled pattern, characteristic of a leiomyoma (fig. 1). Thus, Masson's trichrome, a more specific stain, was used to confirm the diagnosis of this rare tumor: the tumor cells stained bright red thus confirming that the tumor indeed was a leiomyoma. The nodule with many small cysts was diagnosed as the ovary, surrounded by the tumor (fig. 2).

Discussion

Although its precise histogenesis is uncertain, primary ovarian leiomyoma probably originates from smooth muscle present in the walls of blood vessels which supply the ovaries or extremities of the ovarian ligament [2]. However, many other sites (undifferentiated germ cells in the ovarian stroma [3], remnants of the wolffian body [4], smooth muscle itself within the ovary and its ligaments [5, 6], stroma of endometriosis [7]) have been proposed as the origin of these tumors.

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Fig. 1. Junction of the ovarian leiomyoma and follicle containing the ovarian cortex. HE. $\times 100$. Fig. 2. Histologic appearance of ovarian leiomyoma illustrating coarse, interlacing fascicular aggregations of large spindle cells. HE.

X200.

Primary ovarian leiomyoma must be differentiated from other solid stromal ovarian tumors [8]. Further differential diagnoses should be made for other smooth muscle disorders that secondarily involve the ovary, such as intra-vascular extensions of intravenous leiomyomatosis to the hilar vessels [9] and leiomyomatosis peritonealis disseminata, which may be multiple and situated at the surface of the ovary [10]. Pedunculated subserosal uterine leiomyoma, which has become attached to the ovary after losing its attachment, should be added [1]. Frequent association with their uterine counterpart should always be in mind [2].

Clinically, many patients are asymptomatic and the tumors are discovered incidentally, because they usually measure < 3 cm in diameter and rarely become large enough to present as a pelvic mass with or without its related symptoms [2]. Ascites is rare [1] and only 1 case with hydro thorax was reported [11].

To our knowledge, this tumor is encountered in women aged between 20 and 65 years with only about one-sixth of cases occurring after menopause [1]. Ovarian leiomyomas have been noted in pregnant women [12], but no information is available about the effects of the gravid state on the tumor or vice versa. Our case was 32 years old and had no complaint when she was admitted to our hospital for termination of her 6-week pregnancy at her request; however, pelvic examination followed by TVU evaluation revealed an adnexal mass complicating her pregnancy.

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