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Clinical Note: Excision of a Large Ovarian Leiomyoma in a Centenarian

James A. Sapala, MD* and M. Andrew Sapala, MD*

Leiomyoma of the ovary is a rare neoplasm; only 28 cases in the literature are known to us. In 1979, we encountered a tumor of this type and are reporting it here

because of its great size and its occurrence in a 103-year-old woman. The patient has been well for two years since the tumor was removed.

Leiomyoma of the ovary is a rare neoplasm. In 1972, the group from the Mayo Clinic found 23 cases in their review of the literature and added five of their own (1). We are reporting our case because of the unusually large size of the tumor and because of the advanced age of the patient (103 years).

Case Report

A 103-year-old white woman was admitted to the Albion Community Hospital in October 1979 for evaluation of a large abdominal mass, which had become progressively larger during the preceding five years. Four years before, she had profuse vaginal bleeding, with the suspicion that it was caused by degeneration of a large uterine fibroid. Tissue obtained at dilatation and curettage was not abnormal. One year before, a simple mastectomy had been done under local anesthesia for carcinoma. One month before admission, she developed symptoms of partial bowel obstruction; when these persisted, she was admitted for long tube decompression of the gastrointestinal tract.

Physical examination showed a cachectic elderly woman whose appearance agreed with her stated age of 103 (Fig. 1). She complained of "crampy" pain in the abdomen. She was moderately dehydrated, and there was a 4+ leg and pedal edema bilaterally. The abdominal cavity seemed to be filled with a huge solid tumor mass. Pelvic examination showed an atrophic cervix. A film of the abdomen showed some dilated loops of small bowel above the tumor (Fig. 2). Shortly after admission, the intestinal obstruction became complete, and surgical intervention was imperative.

The abdomen was opened with a long midline incision. Initially, we thought that the tumor was retroperitoneal

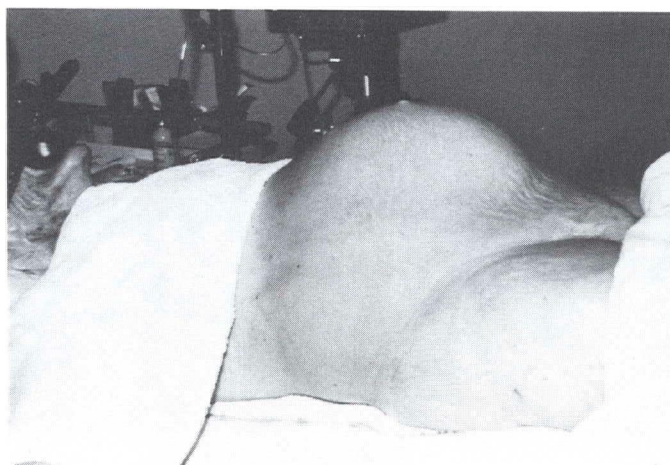


Fig. 1

Photograph of patient prepared for the operation.

because it was difficult to mobilize it from the vena cava and the base of the transverse mesocolon (Fig. 3). We assumed that the tumor was malignant and would not be readily resectable. However, a plane of dissection was found posterior to the tumor, deep in the cul de sac of Douglas. Eventually, the intact tumor, which was the size of a bushel basket, was enucleated from the paravertebral gutters. Unfortunately, no scale was available to weigh the intact tumor. The uterus, right ovary, and both Fallopian tubes were identified. The left ovarian ligament was located, but the left ovary was not found.

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The fresh specimen was whitish-yellow in color. Sectioning revealed multiple fluid-filled cavities, apparently the result of cystic degeneration. The pathologist described the tumor as follows: "The specimen is fixed in formalin. It is an irregularly lobulated mass designated as 'abdominal mass' which weighs 4,700 gm and measures 33 x 30 x 19.5 cm. It is grayish brown to reddish brown and focally hemorrhagic with adherent fibrous tissue tags externally. Microscopic sections show the lesion to be composed of proliferating spindle cells of smooth muscle

type. The lesion is rather cellular but mitotic figures are infrequent. A fibro-connective tissue capsule encases the lesion. Special stains confirm the smooth muscle origin of the lesion. Impression: leiomyoma (pelvic) (Fig. 4).

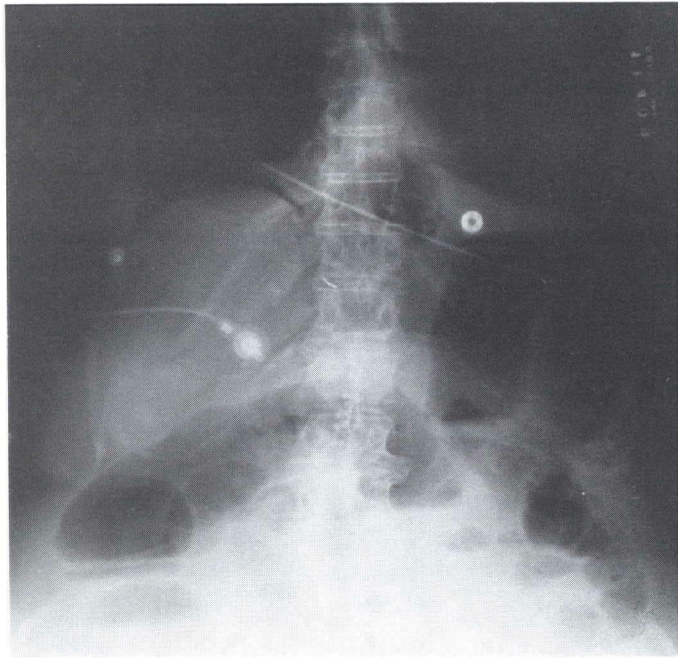


Fig. 2

Abdominal film showing dilated loops of small intestine above the tumor.

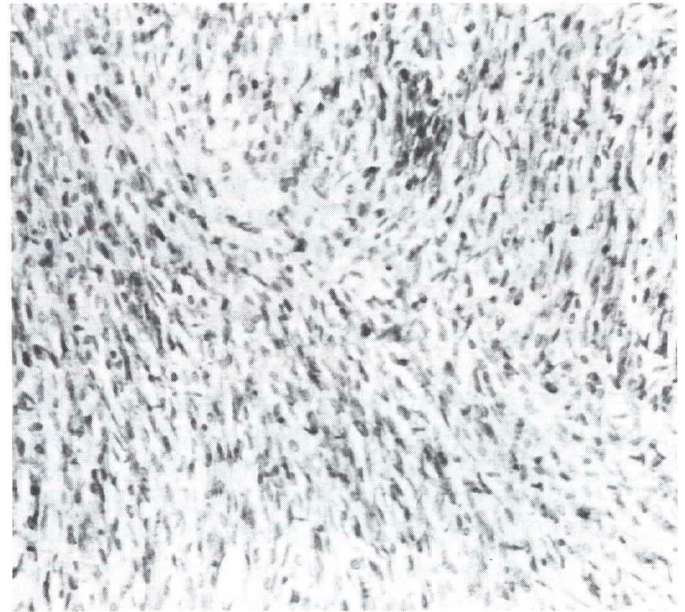


Fig. 4

Photomicrograph of tumor demonstrating smooth muscle fibers among collagen fibers (Masson's trichrome stain) X200.

The patient's postoperative course was uncomplicated except for the occurrence of adynamic ileus for a few days. She was discharged on the fifteenth postoperative day. Two years later, she was healthy as she awaited her 105th birthday!

Discussion

Although it is debatable, we have chosen to assume that this pelvic leiomyoma was of ovarian origin. The left ovary was missing, and obviously, in a tumor of this size, no remnant would be recognizable. The smooth muscle nature of the tumor is easily established by the differential staining with Masson's trichrome stain or Van Gieson's stain. Muscle fibers stain deep red, while collagen fibers stain blue. Electron microscopic studies have shown the presence of smooth muscle in the ovaries of human beings, the rabbit, and the cat (2). It has been proposed that undifferentiated germ cells of ovarian stroma may be stimulated to differentiate into smooth muscle and eventually lead to tumor formation (3). Another theory is that the tumor arises from the smooth muscle of the arteries supplying the ovary or its ligaments (4).

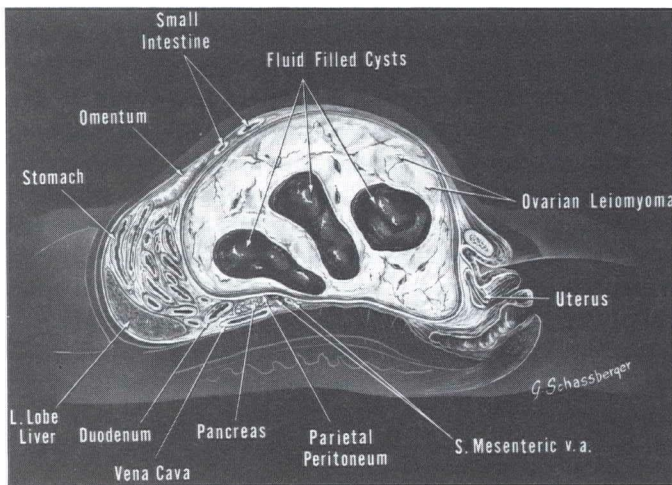


Fig. 3

Artist's conception of operative findings (sagittal section).

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The relation of ovarian function to the time of appearance of the tumor has been noted. In the 28 cases collected by Fallahzadeh, et al (1), only five were postmenopausal, and our case would easily fall into that classification.

Acknowledgment

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