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Case Report:

Primary Leiomyosarcoma of Ovary

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Abstract:
Primary ovarian leiomyosarcomas is a rare neoplasm which comprises less than 3% of ovarian tumors. Their origin, etiology, histologic features, clinical behavior, and optimal treatment are still obscure. We report a case of leiomyosarcoma of ovary, diagnosed on histopathology in a 60 year old female and discuss the literature.
Key Words: Ovary, Leiomyosarcoma, Ovarian neoplasms

Introduction:

Primary ovarian sarcomas are rare gynecological tumors accounting for less than 3% of all ovarian tumors.[1,2] These malignant smooth muscle tumors have an uncertain origin, since smooth muscle is not present in the ovary. Behavior is aggressive with a poor prognosis particularly in the postmenopausal woman, where these neoplasms usually occur. Primary ovarian sarcomas are usually diagnosed at an advanced stage and may present with abdominal pain and a mass. These neoplasms are rare with less than 50 cases in the literature.[1] Because of its extreme rarity; we present this case of ovarian neoplasm in a postmenopausal woman. Literature of primary leiomyosarcoma of the ovary is reviewed.

Case Report:
A 60 year old female, para six, postmenopausal for 20 years, was admitted in the gynecology department of our hospital with complaints of having lower abdominal mass for last five months. She was found anemic on general physical examination. On per vaginum examination a mass was felt in right fornix of variegated consistency with restricted mobility and was non tender. On per rectal examination, mass was felt from anterior rectal wall but rectal mucosa was free. Her hemoglobin was 7.2 gm%. Hematological and biochemical parameters including tumor marker CA-125 were normal. Cervical PAP smear was also normal. Transabdominal sonography confirmed the presence of a 12.8x10.3 cm pelvic mass arising from right adnexa with cystic and solid areas, separated by septations. There was no evidence of metastasis or free fluid in the pelvis. At laparotomy, right ovary was replaced by a friable growth of 25×20 cm size with capsule ruptured, solid areas and papillary excrescences present. Tumor was involving 20cm of gut loop in ileal portion. Uterus, left fallopian tube and left ovary were grossly normal.

Total abdominal hysterectomy with bilateral salpingo-oophorectomy along with ileo-ileal anastmosis was performed.

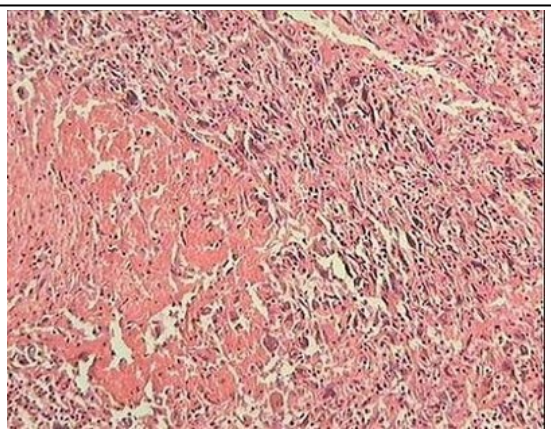

Figure 1: Photomicrograph showing pleomorphic tumor cells, high mitotic activity and tumor giant cells along with a focus of necrosis. (400x, H&E.)

Peritoneal washings with omental biopsy were taken. Microscopic examination demonstrated ovarian stroma replaced by highly vascular tumor, pleomorphic spindle shaped cells, increased mitotic activity (greater than 10 per 10 high power fields), tumor giant cells and necrosis.(Fig-1) The pleomorphic cells had abundant eosinophilic cytoplasm with vesicular nuclei and prominent nucleoli. Van Gieson's and Masson's trichome stains helped to confirm the smooth muscle origin. Microscopic examination of left ovary revealed normal ovarian stroma along with foci of whorled bundles of benign smooth muscle cells, depicting features of leiomyoma. No leiomyoma were detected in sections taken from uterus and tubes.[2] Peritoneal washing, omental biopsy and gastrointestinal tract mucosa was normal on histopathology.

Discussion:

The most common primary ovarian sarcomas are fibrosarcomas, endometrial stromal sarcomas, and rhabdomyosarcoma. [3,4] Primary ovarian leiomyosarcomas usually occur in postmenopausal women although there have been a few reported cases occurring in younger women.[1,3] They typically present as a solitary, lobular, soft fleshy solid mass with hemorrhage and cystic degeneration. Most are unilateral lesions greater than one cm in diameter. Pathogenesis is uncertain with many theories including malignant degeneration of an ovarian leiomyoma, or of the smooth muscle present in the

wall of the blood vessels in the cortical stroma and corpus luteum, muscular attachments of the ovarian ligament, wolfian duct remnants, or totipotential ovarian mesenchyme, or arising in a teratoma.[1] Treatment of choice is radical surgery followed by adjuvant chemotherapy or radiotherapy.[4]

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