

## A spindle cell ovarian sarcoma report

Aiwen Le<sup>1</sup>, Kaixun Wang<sup>2</sup>, Zhonghai Wang<sup>1</sup>, Xiao Yun Dai<sup>1</sup>, Tian Hui Xiao<sup>1</sup>, Rong Zhuo<sup>1</sup>, Rui Yuan<sup>3</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, Huazhong University of Science and Technology Union Shenzhen Hospital, The 6th Affiliated Hospital of Shenzhen University Health Science Center, Tiaoyuan road, nan shan district, Shenzhen, Guangdong Province

<sup>2</sup>Department of pathology, Huazhong University of Science and Technology Union Shenzhen Hospital, The 6th Affiliated Hospital of Shenzhen University Health Science Center, Tiaoyuan road, nan shan district, Shenzhen, Guangdong Province

<sup>3</sup>The First Affiliated Hospital of Chongqing Medical University, yi xie yan road, qi zhong district Chongqing, Chongqing (China)

### Summary

**Objective:** Primary spindle cell ovarian sarcomas are rare lesions of the genital tract. The authors report the case of a patient with a spindle cell ovarian sarcoma. **Materials and Methods:** A 48-year-old woman presented with a left adnexal mass. Pretreatment evaluation suggested no evidence of metastatic disease until ultrasound revealed a sizable solid cystic lesion in the left adnexal region. **Results:** The patient first underwent laparoscopic left salpingo-oophorectomy. Pathological examination and immunohistochemistry demonstrated a spindle cell ovarian sarcoma. Follow-up surgery was laparoscopic hysterectomy + right salpingo-oophorectomy + omentectomy; pathology was normal. **Conclusions:** Women undergoing gynecologic care would benefit from routine evaluation of the ovaries to detect these rare neoplasms.

**Key words:** Ovarian sarcoma; Spindle cell sarcoma.

### Introduction

Low-grade myofibroblastic spindle cell sarcomas typically occur in the head and neck region [1]. Ovarian sarcoma is a rare malignant tumor. It usually occurs as carcinosarcoma, formerly known as malignant mixed Müllerian tumor, less common are rhabdomyosarcoma, fibromyosarcoma, leiomyosarcoma, and angio-myosarcoma. The disease-free interval and survival in ovarian sarcoma patients are lower than those in epithelial ovarian cancer patients [2]. There are few reports in the literature regarding spindle cell ovarian sarcoma.

### Case Report

A 48-year-old woman felt a paroxysmal vague pain in the lower abdomen without obvious cause one week prior, the pain was aggravated upon pressing, and was alleviated with rest. The patient had minimal vaginal bleeding but had no other discomforts like fever, nausea, and vomiting. The patient was a postmenopausal woman and had her last menstrual period on August 20, 2017.

B-ultrasound showed that the uterus had a regular size and shape, with homogeneous muscular layer echoes, and the endometrium was 7 mm in thickness. A sizable (73 × 62 mm) solid cystic lesion was noted in the left adnexal region, with a clear boundary. The lesion was predominantly solid, with a few fluid sonolucent areas. There were no obvious abnormal echoes in the right adnexal region.

The patient underwent laparoscopic left salpingo-oophorectomy on August 3, 2018 at Shenzhen Nanshan Hospital. Gross description included a pile of grayish

yellow and grayish red tissues, 4×3×2 cm in volume. The pathologist's impression/diagnosis included cellular fibroma or granulosa cell tumor. USA diagnostic interpretation, performed at the Cleveland Clinic, included immunohistochemistry which tested negative for inhibin, calcitonin, calretinin, CD99, keratin, EMA, Melan A, S-100, SMA, WT-1, CD10, CD117, cyclin D1, desmin, and DOG-1. Vimentin and CD56 tested positive. Ki-67 and reticulin were non-contributory. Together with the presence of atypia, mitoses and a lack of necrosis, the neoplasm was interpreted as a low-grade spindle cell sarcoma from ovarian mesenchymal tissue, not otherwise specified (Figure 1). The patient underwent laparoscopic hysterectomy + right salpingo-oophorectomy + omentectomy on August 24, 2018, and pathology was normal. Final diagnosis included left spindle cell ovarian sarcoma Stage IA. The patient was not given chemotherapy.

### Discussion

Low-grade myofibroblastic spindle cell sarcomas typically occur in the head and neck regions [1]. Ovarian sarcoma is a rare malignant tumor. It usually occurs as carcinosarcoma, (formerly known as malignant mixed Müllerian tumor), less common are rhabdomyosarcoma, fibromyosarcoma, leiomyosarcoma, and angio-myosarcoma. The disease-free interval and survival in ovarian sarcoma patients are lower than those in epithelial ovarian cancer patients [2]. There are few reports in the literature regarding spindle cell ovarian sarcoma.

In conclusion, spindle cell ovarian sarcoma is a rare malignant ovarian tumor, and its prognosis is poor. Women

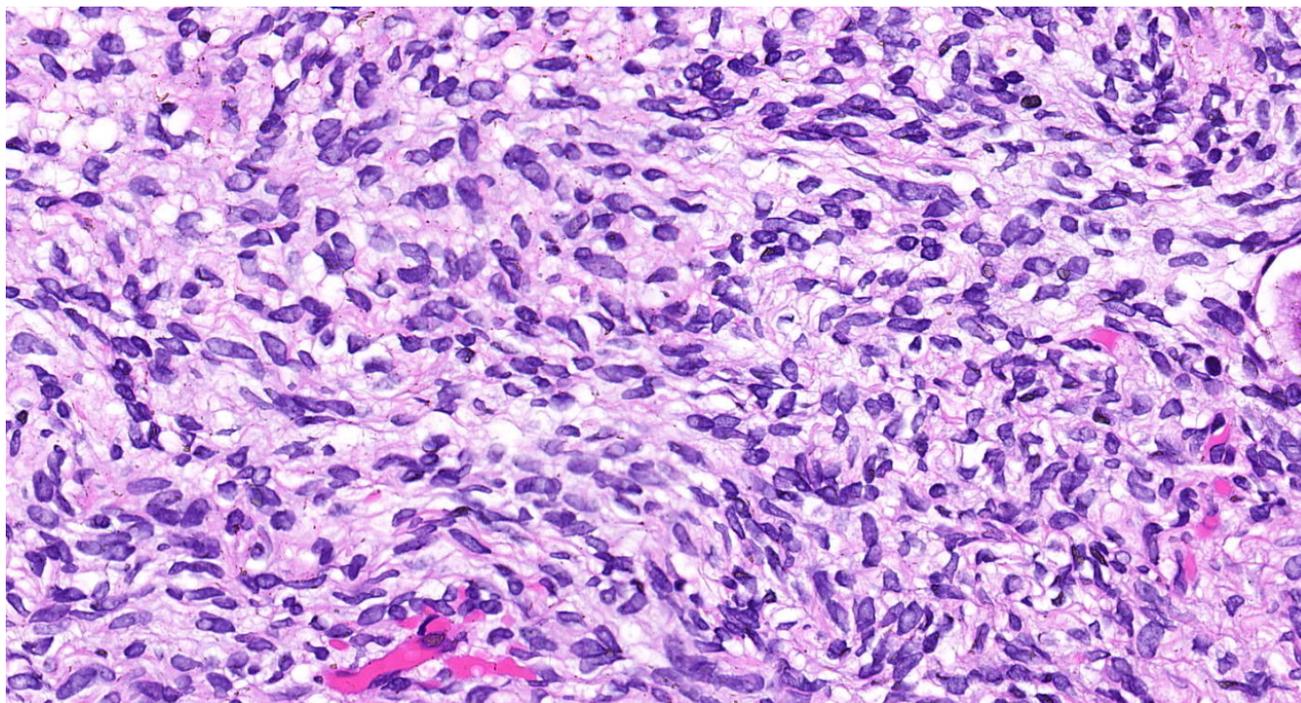


Figure 1. — Histology showing diffuse infiltrating spindle cell proliferation (original magnification  $\times 400$ ).

undergoing gynecologic care would benefit from routine evaluation of the ovaries to detect these rare neoplasms. The diagnosis is mainly based on pathological examination, and immunohistochemistry is helpful for diagnosis. So far, there is no uniform treatment standard, therefore further research to accumulate more sample data is necessary.

#### Author contributions

Aiwen Le and Rui Yuan have made substantial contributions to the conception or design of the work; Kaixun Wang, Zhong hai Wang, Xiao Yun Dai, TianHui Xiao, Rong Zhuo have made the acquisition, analysis, or interpretation of data for the work.

#### Ethics approval and consent to participate

The study protocol was approved by the ethics committee of Huazhong University of Science and Technology Union Shenzhen Hospictal (2018-072652), and all participants provided written informed consent.

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#### Conflicts of interest

The authors declare that they have no conflicts of interest.

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#### References

- [1] Saito T., Mitomi H., Kurisaki A., Torigoe T., Takagi T., Suehara Y., *et al.*: "Low-grade myofibroblastic sarcoma of the distal femur". *Int. J. Surg. Case Rep.*, 2013, 4, 195.
- [2] Bacalbasa N., Balescu I., Dima S., Popescu I.: "Ovarian sarcoma carries a poorer prognosis than ovarian epithelial cancer throughout all FIGO stages: a single-center case-control matched study". *Anti-cancer Res.*, 2014, 34, 7303.

Corresponding Author:

RUI YUAN, M.D.

Department of Obstetrics and Gynaecology,  
the First Affiliated Hospital of Chongqing Medical University, Chongqing 400011 (China)

E-mail: leaiwen19@126.com