Progressive ovarian sertoli – leydig cell tumor: case report

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ABSTRACT

Introduction: Ovarian Sertoli – Leydig Cell Tumor (SLCT) are one of sex cord tumor that has incidence rate less than 0.2% of all ovarian tumors. It occurs predominantly in second and third decades of lifetime. It has characteristics mostly low-grade malignant although poorly differentiated type may behave more aggressively. Clinical characteristic of ovarian SLCT usually hormonal changes, nevertheless in patients without hormonal changes, the manifestation of the disease consists of abdominal pain and abdominal enlargement, and palpable adnexal mass on physical diagnostic.

Case: a 52 years woman that has been undergo right salpingoofolectomy 5 months prior with PA result shows poorly differentiated sertoli – leydig cell tumor, and refusing to chemotherapy. She came with chief complaint of abdominal enlargement since 3 months accompanied with lower abdominal pain 2 weeks prior. Ultrasound examination shows cystic ovarian neoplasm with solid part size 9 x 9 x 9 cm from left adnexa. Tumor markers that arise are Alpha–Fetoprotein (AFP) 52 ng/mL and Lactate Dehydrogenase (LDH) = 432 U/mL which correspond to sex cord tumor. She has undergone Laparotomy Total Abdominal Hysterectomy Left Salpingoofoectomy and chemotherapy afterward.

Conclusion: Ovarian Sertoli – Leydig Cell Tumor (SLCT) are a rare sex cord ovarian tumor that may behave more aggressively as it poorly differentiated. It has manifestations of hormonal changes and also abdominal enlargement.

Keywords: ovarian tumor, ovarian cancer, sertoli – leydig cell tumor.


INTRODUCTION

Sex cord-stromal tumors are rare tumors of the ovaries, generally occurring in the first 2 to 3 decades of life, and accounting for about 7% of all primary ovarian malignancies, excluding granulosa cell tumors in adults, which are characterized by later onset with a peak incidence between 50 and 55 years.1 Sex-cord stromal tumors are divided into 3 main categories: pure stromal tumors, pure sex-cord stromal tumors, and mixed-sex cord-stromal tumors. The morphologic appearance can vary widely within a tumor type, and there is morphologic and immunohistochemical (IHC) overlap between different SCST types, as well as nomenclature variations, all of which contribute to the diagnostic challenges these tumors pose.2

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To this day, the origin of gonadal sex cords is debatable. While some researchers believe they are descended from coelomic epithelium, others believe they are descended from mesenchyme.2 The majority of SLCTs are unilateral tumors. Bilateral occurrences account for only 1.5% of all occurrences. The majority of cancers are ovarian-specific, and 97.5% are stage I when discovered. Because SLCT is uncommon, the imaging results of these tumors have not yet been fully explained. The tumor grading and staging degree are significantly linked with the prognosis of ovarian SLCTs. However, managing SLCT remains difficult due to a lack of established management protocol standards. Fertility-saving surgery is the preferred procedure in young women.2,3

CASE DESCRIPTION

A 52 years woman who had undergone right salpingoofoectomy 5 months prior with PA result shows poorly differentiated sertoli – leydig cell tumor, and refusing chemotherapy. She came with chief complaint of abdominal enlargement since 3 months accompanied with lower abdominal pain 2 weeks before surgery. Ultrasound examination shows cystic ovarian neoplasm with solid part size 9 x 9 x 9 cm from left adnexa. Tumor markers that arise are Alpha–Fetoprotein (AFP) 52 ng/mL and Lactate Dehydrogenase (LDH) 432 U/mL which correspond to sex cord tumor. She has undergone Laparotomy Total Abdominal Hysterectomy Left Salpingoofoectomy and chemotherapy afterward.
Differentiated tumors may contain heterologous materials (carcinoid tumor, skeletal muscle, cartilage, and intestinal epithelium). When viewed under a microscope, well-differentiated SLCTs are confined and composed of lobules of solid or hollow tubules divided by fibromatous stroma. Columnar to cuboidal Sertoli cells border the tubules, with basally positioned nuclei, tiny nucleoli, and an abundance of eosinophilic or pale vacuolated cytoplasm. In forms of intermediate differentiation, fusiform cells of the ovarian stroma are found in lobulated clusters. Some of the tubes may have cellular atypia. Five mitoses per ten large, microscopic fields indicate a high mitosis activity level. Leydig cells are commonly found on the periphery of tumors or clusters. Within poorly differentiated SLCTs, poorly differentiated sertoli cells with hyperchromatic nuclei and sparse cytoplasm proliferate diffusely or in spindles (sarcomatous), which is frequently accompanied by vigorous mitotic activity.

SLCTs are used to treat people of all ages and stages of cancer. Individuals with The International Federation of Obstetrics and Gynecology (FIGO) stage IA are candidates for fertility-sparing surgery, but the eligibility of stage IC patients is unknown. The European Society of Medical Oncology recommends abdominal hysterectomy and bilateral salpingo-oophorectomy with careful surgical staging for postmenopausal women and patients with FIGO IB or advanced stages. Postoperative adjuvant chemotherapy is debatable for patients with FIGO stage I, and there is no conclusive evidence that these patients would benefit. Patients with high-risk tumor recurrence characteristics, such as FIGO stages IC to IV, moderate to poor differentiation, or the presence of retiform patterns or heterologous materials, are advised to receive adjuvant chemotherapy. Bleomycin, etoposide, and cisplatin (BEP) are the most commonly used combinations.

Although the role of adjuvant chemotherapy is not well defined, and no randomized trials are available, it has been proposed. Adjuvant chemotherapy is not required in cases of Stage I disease with...
a good prognosis, but it is recommended in cases of poor differentiation or heterologous recurrence.10

CONCLUSION
A large proportion of women with ovarian Sertoli-Leydig cell tumors do not have androgenic manifestations, and many of them are postmenopausal. In most cases, a diagnosis is not reached before surgery. While hysterectomy with bilateral salpingo-oophorectomy and surgical staging are recommended for women with advanced disease or no desire for fertility, fertility-sparing surgery should be considered in younger women with early disease, because spontaneous pregnancies and healthy childbirth are possible after treatment. Ovarian Sertoli-Leydig Cell Tumor are a rare sex cord ovarian tumor that may behave more aggressively as it poorly differentiated. It has manifestations of hormonal changes and also abdominal enlargement.

CONFLICT OF INTEREST
All author declares there is no conflict of interest regarding publication of current report.

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AUTHOR CONTRIBUTION
All authors had contributed to manuscript writing and agreed for final version of manuscript for publication.

ETHICAL CONSIDERATION
The patient had received signed written informed consent regarding publication of medical data in medical journals with confidentiality to personal information.

REFERENCES