

Sertoli Leydig Cell Tumor of Ovary

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Abstract: Sertoli-Leydig cell tumor is a group of tumors composed of variable proportions of Sertoli cells, Leydig cells and sometimes heterologous elements. Most tumors are unilateral, confined to the ovaries, and are seen during the second and third decades of life. These tumors are characterized by the presence of testicular structures that produce androgens. Hence, many patients have symptoms of virilization depending on the quantity of androgen production.¹

We are presenting a case of 16 yrs old girl who presented with symptoms of virilization. She was operated for the ovarian mass. A diagnosis of sertoli-leydig cell tumor was rendered.

Key words: *Sertoli-Leydig cell tumor, Androgen secreting Neoplasm, Virilising Ovarian Tumors*

Introduction

Sertoli-Leydig cell tumor (SLCT) is a rare ovarian tumor that belongs to the group of sex-cord stromal tumors. These constitute less than 0.5% of ovarian tumors.²The tumour is subdivided into many different subtypes. The most typical is composed of tubules lined by Sertoli cells and interstitial clusters of Leydig cells. Patients with Sertoli-Leydig cell tumors present with signs of defeminization followed by masculinization. Age of the patient, stage of the disease and degree of tumor differentiation based on morphology are the most important factors to consider in the management of the case.³

Case Report

A 16 yrs old female presented with amenorrhoea and abnormal hair growth all over the body for 6 months. Pelvic ultra sound showed a left sided ovarian mass.

Laparotomy was done. There was a Left ovarian mass which was resected. A biopsy was taken from right ovary and peritoneal fluid was sent for cytology.

GROSS EXAMINATION: The 7x6x5cm ovarian cyst was received in 10% formalin. It was already cut opened measuring. Cut surface showed multiple cysts,

solid and haemorrhagic areas. The right ovarian biopsy comprised of small soft tissue piece measuring 1x1x0.8cm.

Both the specimens were routinely processed and sections were stained with H/E. From the peritoneal fluid 2 slides were prepared and stained with Giemsa stain.

Microscopic examination: The Sections of left ovarian mass revealed a neoplasm composed of cords, sheets and aggregates of Sertoli like cells Figure I and II. These are separated by stromal cells and sheets of leydig type cells (Figure-II).

The diagnosis of left Ovarian Cyst was Sertoli Leydig Cell Tumor, Intermediate Grade (Meyer's Type II).

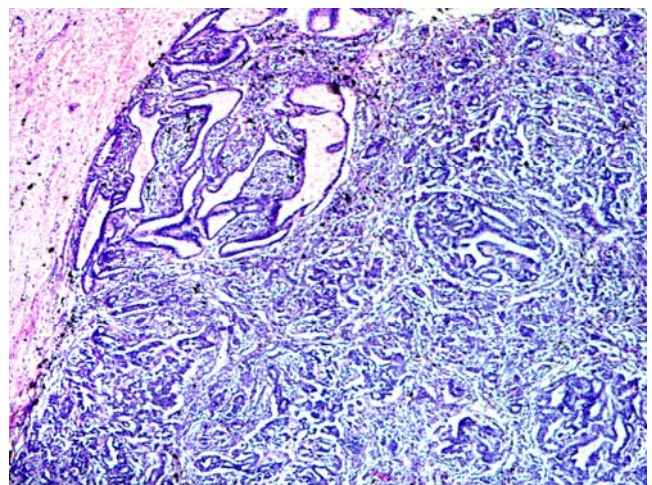


Figure I Cords, Clefts and aggregates of sertoli-like cells, separated by spindle stromal cells. (H & E X 100)

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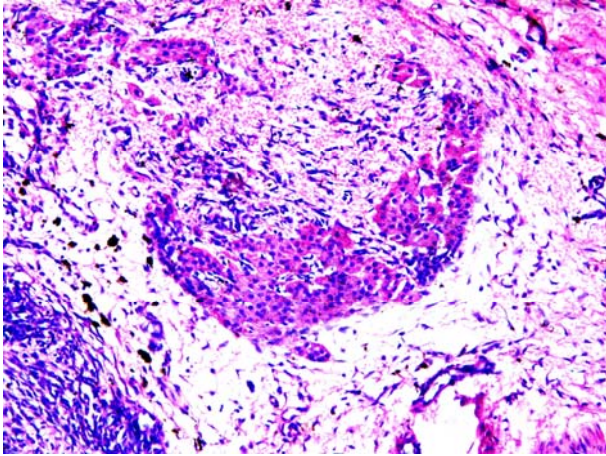


Figure II: Intermixed Leydig and Sertoli cells in the loose stroma. (H & E X 100)

The right ovarian biopsy showed normal histology. Peritoneal fluid showed sheets of mesothelial cells. No malignant cells were seen.

Discussion

Sertoli-Leydig cell tumors are uncommon tumors of ovary. The majority of these patients are seen during the second and third decades of life, with the average age at diagnosis being 25 years.

The history of virilization was the presenting complaint in our patient. Around 50% of cases come to clinical attention because of progressive defeminization.²

The classification proposed by Meyer into well, intermediate, and poorly differentiated, remains important prognostically. Twenty percent of SLCTs exhibit heterologous elements represented by endodermal elements such as cysts and glands and mesenchymal elements such as bone, cartilage or skeletal muscle.

It is the degree of differentiation of structures in these tumors which determines whether the tumors are benign or malignant.¹ The SLCT with heterologous mesenchymal elements are usually poorly differentiated in contrast to neoplasms with endodermal elements, which typically are of intermediate differentiation.⁴

The majority of reported cases are moderately or poorly differentiated combined Sertoli-Leydig cell tumors.⁵

The incidence of clinical malignancy in Sertoli stromal cell tumors is 10–30%. The most reliable indication of malignancy is evidence of local extraovarian spread or metastases at the time of staging laparotomy. Histological grade correlates to some extent with the likely clinical outcome; 11% of moderately differentiated tumors are clinically malignant, while 20% of those with heterologous mesenchymal elements and 60% of poorly differentiated tumors are clinically malignant.⁶

14% of moderately and 30% of poorly differentiated ovarian Sertoli–Leydig cell tumors exhibit retiform foci, so-called because of a resemblance to the rete testis. Tumors with this pattern occur at a slightly younger age (mean age of 15 years) than those without and are less likely to produce clinical signs of virilization.⁷

From the practical viewpoint, the most helpful immunohistochemical findings are the negative staining of sex cord tumors for epithelial membrane antigen, and positive staining for inhibin and calretinin; findings that are converse to those seen in endometrioid carcinomas of the ovary, which commonly have formations that may simulate sex cord tumors.⁸

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