

Case Report

Bilateral Sertoli-Leydig cell tumor of the ovary with Omental metastasis: A Rare case Report

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Abstract: Sertoli leydig cell tumors are exceedingly uncommon tumors of the ovary accounting for less than 0.5% of all ovarian neoplasms and 1% of sex cord tumors. These tumors are functional and secrete testosterone and only rarely they are estrogenic. Hence the patients present with virilization features. Most of the tumors are unilateral and bilaterality is extremely rare. Here we report an unusual case of bilateral sertoli-leydig cell ovarian tumor with vascular invasion and omental deposit in a 30 year old female with history of four months of amenorrhea.

Keywords: Sertoli-Leydig, Omental, Bilateral

INTRODUCTION

Sertoli-Leydig cell tumors of the ovary are composed of variable proportions of Sertoli cells, Leydig cells with primitive gonadal stroma and heterologous elements. These are rare tumors accounting only for about 1% of sex cord-stromal tumors and constitute < 0.5% of all the ovarian neoplasm [2]. Majority of these tumors are benign, and most are localized unilaterally [2]. Bilaterality is reported in only 2% cases [3].

Generally, patients present with virilizing symptoms and signs like amenorrhoea, hirsutism, breast atrophy, clitoral hypertrophy and hoarseness. Rarely patients may present with estrogenic manifestations like isosexual pseudo-precocity and metorrhagia. The most important prognostic factors in these tumors are their stage and degree of differentiation [4]. In about 5% of the patients, tumor progress to extra-ovarian extension [5].

CASE REPORT

30 year old female with P2L2 presented with secondary amenorrhea since four months with history of increased frequency of micturition. Clinical features did not show any signs of virilization. Abdominal examination revealed a firm mass extending upto

umbilicus. USG and MRI pelvis revealed a bilateral solid benign ovarian tumor with moderate ascites. Hysterectomy with bilateral salpingo-oophorectomy was done and specimen was sent for histopathological examination.

Grossly, the right ovary measured 8X5X3cms with smooth and congested external surface. Cut section showed homogenous grey white solid areas. Left ovary measured 10X10X5 cms with similar grey white appearance (figure 1). Microscopically, the tumor showed immature sertoli cells arranged in solid nests, cords and in tubular pattern (figure 2). The cells were small, having round to oval nuclei with scanty cytoplasm. These cell nests were separated from each other from the stromal component that ranged from the densely cellular to hypocellular edematous fibrous stroma with interspersed leydig cell clusters (figure 3). Occasional mitotic activity was seen. Foci of vascular invasion and omental deposit were seen (Figure 4). On immunohistochemistry, immature sertoli cells showed positivity for cytokeratin and stroma for vimentin (figure 6 and 7). Based on the findings, the diagnosis of sertoli –leydig cell tumor of the ovary of intermediate differentiation with vascular invasion and omental deposits was given.



Fig-1: Cut section of the tumor reveals solid uniform grey white areas measuring 8×5×3cm

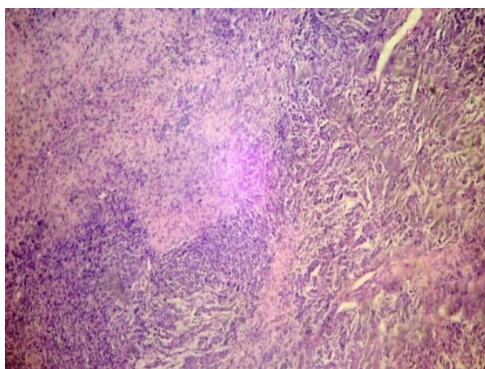


Fig-2: Microscopy shows sertoli cells clusters separated by stromal component (10×, H &E)

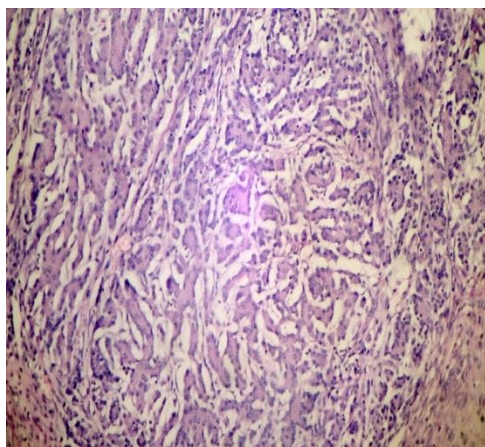


Fig-3: Microscopy shows sertoli cells arranged in tubular pattern (40×, H &E)

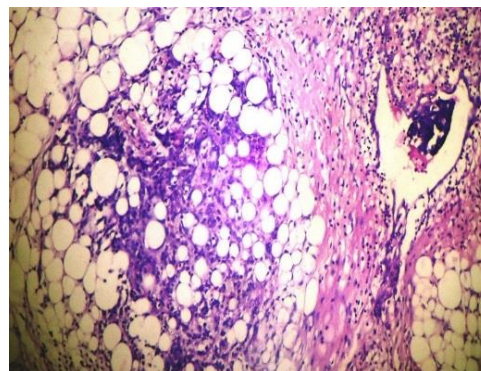


Fig-4: Microscopy shows Omental deposits with vascular invasion. (10×, H &E)

DISCUSSION

Sertoli leydig cell tumors are uncommon sex cord tumors constituting less than 1% of ovarian tumors, seen commonly in younger age group less than 30 years. Majority of the tumors are unilateral, bilaterality being extremely uncommon accounting for less than 2% of the cases [1-3]. About 40% of the tumors are androgenic and hence virilization manifestations are seen in these patients. Serum levels of testosterone and androstenedione is elevated in more than half of the patients. Very rarely tumors can be estrogenic [4, 5].

Generally, these tumors are unilateral, well encapsulated, and solid and measures less than 5 cms in diameter in average [5]. Microscopically, sertoli cells of varying degree of differentiation are arranged in nests, cords and tubular pattern. Interstitial stroma shows clusters of leydig cells which are polygonal cells with centrally placed nucleus having prominent nucleoli and abundant eosinophilic cytoplasm. Sertoli cells are cuboidal to columnar cells with basal nuclei and show moderate to abundant cytoplasm. These cells are positive for inhibin, calretinin, WT-1 and CK. Stroma shows positivity for vimentin [6]. Management of sertoli leydig cell tumor completely depends on staging. Meyer's classification is followed to assess the degree of differentiation to predict the prognosis of the tumor [7].

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