Sclerosing Stromal Tumor of Ovary : A Case Report

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ABSTRACT

A case of 32 year old female of pelvic pain for one month and with past history of hysterectomy performed two year back. Clinical examination revealed palpable abdominal pelvic mass. Ultrasonography showed right pelvic mass arising from right adnexa measuring 15cm x15 cm, predominantly solid with some cystic areas. The patient was suspected of having a malignant ovarian tumor and hence operated. A histopathological diagnosis revealed sclerosing stromal tumor of ovary. Sex cord-stromal tumors account for approximately 8% of all ovarian tumor and prevalence of sclerosing stromal tumor of ovary is 1.5% to 6% .This rare neoplasm is not always possible to predict pre-operatively on the basis of clinical and radiological findings. Histologically, it is characterized by several unique features including pseudolobulation, sclerosis, and prominent vascularity.

Sclerosing stromal tumor is rare but possibility of this tumor should be considered in young patients with ovarian mass having the characteristic histopathological morphology.

KEY WORDS

Pelvic mass, pseudolobulation, sclerosing stromal tumor

INTRODUCTION

Chalvardjan and Scully in 1973 for the first time defined the Sclerosing stromal tumor (SST) which is benign and an extremely rare ovarian sex cord stromal tumor with distinctive pathological features.[1] Sex cord stromal tumors represent approximately 8% of ovarian neoplasms and SSTs constitute 2.5 to 6% of the tumours with more than 80% of such tumors are found in young adult women in the second and third decade of life.[2-5]

CASE REPORT

A case of 32 year old female with past history of hysterectomy performed two year back came with complain of pelvic pain since one month. Clinical examination revealed palpable abdominal pelvic mass. Ultrasonography showed right pelvic mass measuring 15cm x15 cm, predominantly solid with some cystic areas. The patient was suspected of having a malignant ovarian tumor and hence operated. On gross inspection, the removed right ovarian mass measured 17cm x15cm x12cm, appear grey-white with well encapsulated surface (Fig. 1, 2). The cut surface shows mostly solid area with tiny cystic areas at places. Multiple sections stained with H& E stain examined under microscope show histologic features of pseudolobular pattern with widespread areas of sclerosis and a two-cell population of spindled and round cells (Fig.3,4,5). Haemangiopericytoma-like vessels, myxoid to fibrotic stroma and focal cystic change were noted. Mitoses and necrosis were absent. The final diagnosis was that of sclerosing stromal tumor of the ovary. Post-operative recovery was uneventful.

Figure 1: Macroscopically variegated sectioned surface with solid and cystic area.

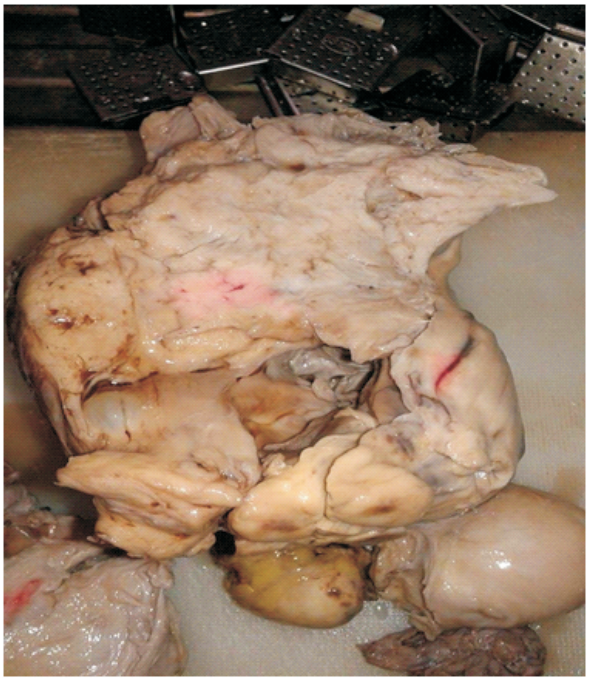


Figure 2 : Macroscopically cut surface showing grey white solid areas with tiny cystic space.

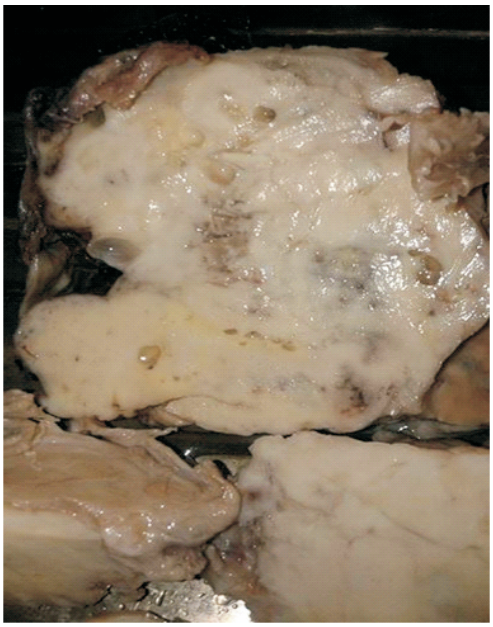


Figure 3 : Microscopically pseudolobular pattern with hypercellular and hypocellular areas. (H&E 10X)

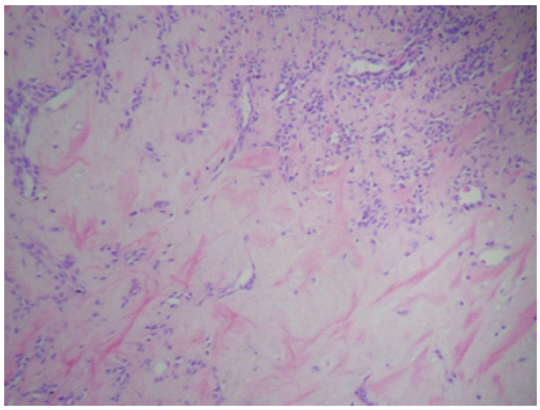


Figure 4 : Microscopically hemangiopericytoma like vascular pattern. (H&E 10X)

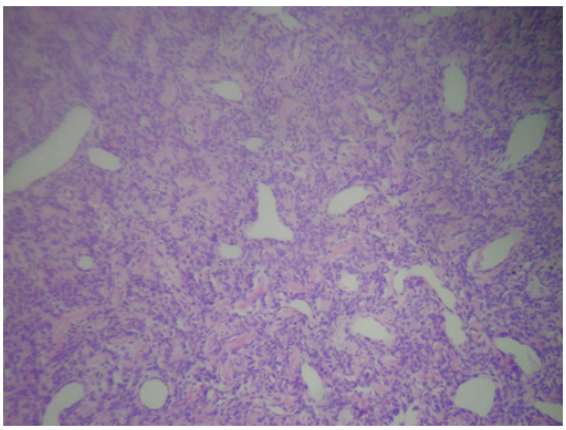
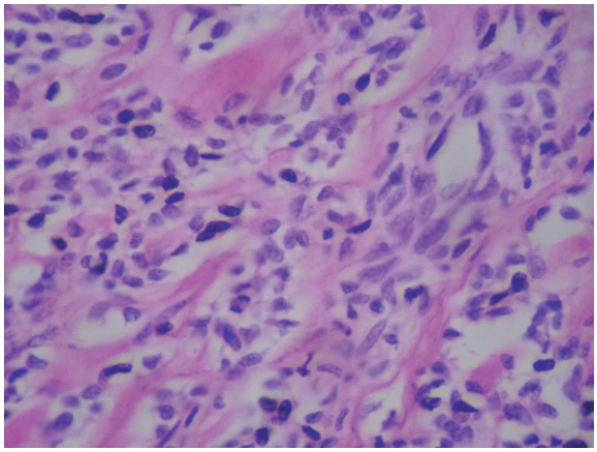


Figure 5 : Microscopically. dual cell population: spindle cell and round cell. (H&E 40X)



DISCUSSION

SST is rare according to the literature. Ovarian SST occurs more commonly in young female during the second to third decades of life with an average age of occurrence of 28 years and most of the reported cases have been unilateral which is consistent with our case. Bilateral SST was depicted in only four cases till 2009.[3,4,5,6,]

The most common presenting clinical features are a palpable pelvic mass, menstural irregularity, pelvic pain, hairsuitism and virilization. Elevated serum CA125 level and/or ascites were depicted in some cases. Meigs' syndrome associated with SST of the ovary has also been described in few reported cases.[7,8,9,10,11]

Etiology of this tumour is not very well defined, however, ultrastructural features suggest origin from pluripotent immature myoid stromal cells of ovarian cortex.[7,12]

Macroscopically and microscopically having its distinct histopathological findings helps in definitive diagnosis of SST. The size of the tumor varies from 1cm to 31cm in diameter. And typically unilateral and well encapsulated.[9] The cut surface is solid, grey white with occasional yellow foci and usually contains edematous or cystic area. Microscopically it shows interlobular fibrosis, marked vascularity, and the presence of a dual cell population: collagen-producing spindle cells and lipid-containing round or oval cells. In addition, haemangiopericytoma like vessels and myxoid to fibrotic stroma are noted.[9]

Immunohistochemistry (IHC) is also helpful for confirmation. Sex cord-stromal tumors like thecoma, fibroma, lipoid cell tumors, vascular tumors, massive ovarian edema, and rarely Krukenberg's tumor can be considered in the differential diagnoses. The IHC markers like inhibin, calretinin, melan–A, WT–1, CD34, CD99 and mullerian inhibiting substance were studied for making the differential diagnosis of SST.[13,14,15]

CONCLUSION

Sclerosing stromal tumor is rare but possibility of this tumor should also be considered in young patients with ovarian mass having the characteristic histopathological morphology.

REFERENCES :

1. Chalvardjian A, Scully RE. Sclerosing stromal tumor of the ovary. Cancer. 1973;31:664–70.
2. Peng HH, Chang TC, Hsueh S. Sclerosing stromal tumor of ovary. Med 2J. 2003; 26:444–8.
3. Ismail SM, Walker SM. Bilateral virilizingsclerosing stromal tumors of the ovary in a pregnant woman with Gorlin's syndrome: Implications for pathologenesis of ovaria stromalneoplasms.Histopathology. 1990; 17:159–63.
4 Korobowicz E, Wronecki L, Siezieniewska-Skowroñska Z. Sclerosing stromal tumour — a rare ovarian benign neoplasm: Description of threecases. Foli Histochem Cytobiol. 2001;39(Suppl 2):131–2.
5. Chang W, Oiseth SJ, Orentlicher R, Agarwal G, Yahr LJ, Cayten CG. Bilateral sclerosing stromal tumor of the ovaries in a premenarchal girl. GynecolOncol. 2006;101:342–5.
6. Chang YW, Hong SS, Jeen YM, Kim MK, Suh ES. Bilateral sclerosing stromal tumor of the ovary in a premenarchal girl. PediatrRadiol. 2009;39:731–4.
7. Kaygusuz EI, Cesur S, Cetiner H, Yavuz H, Koc N. Sclerosing stromal tumour in young women: Clinicopathologic and immunohistochemical spectrum. J Clin Diagn Res. 2013;7:1932–5.
8. Lam RMY, Geittmann P. Sclerosing stromal tumor of the ovary: a light, electronmicroscopic and enzyme histochemic al study. Int J Gynecol Petrol. 1998;7:280–9

9. Akbulut M, Colakoglu N, Soysal ME, and Duzcan SE. "Sclerosing stromal tumor of the ovary: report of a case and review of the literature," Agean pathology journal, 2004;1:84-89.
10. Kawauchi S, Tsujı T, Kaku T, Kamura T, Nakano H, Tsuneyoshi M. Sclerosing stromal tumor of the ovary: a clinicopathologic, immunohistochemical, ultrastructual and cytogenetic analysis with special reference to its vasculature. Am J Surg Pathol. 1998;22:83–92
11. Cashell AW, Cohen ML. Masculinizing slerosing stromal tumor of the ovary during pregnancy. Gynecol Oncol. 1991;43:281–85. 8. Liang YF, Zeng JC, Ruan JB, Kang DP,
12. Ozdemir O, Sari ME, Sen E, Kurt A, Ileri AB, Atalay CR. Sclerosing stromal tumour of the ovary: A case report and the review of literature. Niger Med J 2014;55:432-7
13. Baker PM, Oliva E. Immunohistochemistry as a tool in the differantial diagnosis of ovarian tumors: an update. Int J Gynecol Pathol. 2004;24:39–55.
14. McCluggage WG, Maxwell P. Immunohistochemical staining for calretinin is useful in the diagnosis of ovarian sex-cord stromal tumours. Histopathology. 2001;38: 403–08.
15. Zhao C, Vinh NT, Mc Manus K, Dabbs D, Barner R, Vang R. Identification of the most sensitive and robust immunohistochemical markers in different categories of ovarian sex cord-stromal tumors. Am J Surg Pathol. 2009;33:354–66.