Laparoscopic Management Of Sclerosing Stromal Tumor Of Ovary: A Case Report

M Sharma, A Kriplani, P Garg, B Malhotra, S Savithrisowmya, N Bhatla

Citation

M Sharma, A Kriplani, P Garg, B Malhotra, S Savithrisowmya, N Bhatla. *Laparoscopic Management Of Sclerosing Stromal Tumor Of Ovary: A Case Report*. The Internet Journal of Gynecology and Obstetrics. 2007 Volume 9 Number 2.

Abstract

Sclerosing stromal tumor of ovary is a benign tumor occurring predominantly in young women in second – third decade which is amicable to treatment by minimally invasive surgery. This case study demonstrates laparoscopic removal of sclerosing stromal tumor of ovary in two young women.

INTRODUCTION

Sclerosing stromal tumor is a benign tumor, first described by Chalvardjian and Scully in 1973 ([1]). Since than less than 100 cases have been reported most of which occurred in young women in second – third decade with characteristic feature of the cellular areas of the tumor undergoing necrosis. Initial studies designated sclerosing stromal tumor of the ovary as a non functional entity, Damjanov et al reported a case in which urinary excretion of estrogens and androgens decreased after excision of the tumour ([2]). Subsequently there are many reports which demonstrate that the sclerosing stromal tumor is a functioning ovarian lesion causing anovulation and infertility ([3]). This case report described laparoscopic removal of the tumor occurring in two young women.

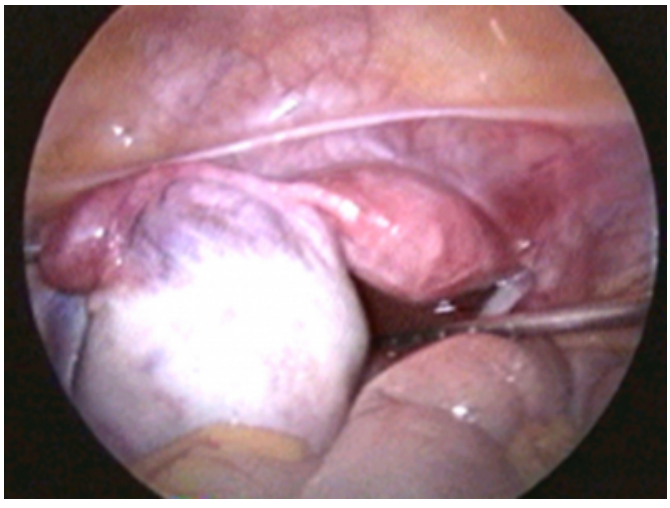
CASE 1

A 19 yr old married woman came to our out patient department, with complaints of polymenorrhagia of one and half years. She had attained menarche at the age of 13 years and has been having regular menstrual cycles of 3 to 4 days occurring at 28 to 30 days intervals until the age of 18 years, when she started having heavy cycles lasting for 5 to 6 days with heavy flow occurring at the intervals of 15 days. She has been married for last 10 months, not using any contraception and has not conceived yet. Her pelvic examination revealed a 6 x 5 cm mass in the left fornix which was firm, mobile and nontender. Ultrasonography showed left sided ovarian mass with homogenous echoes suggesting a solid ovarian tumor probably germ cell tumor. The uterus and the other ovary were normal. Contrast enhanced computed tomography showed a well defined mass 6 x 4.5 cm in the left adnexa, and the rest was normal. Serum markers – CA-125, β-HCG, LDH and AFP were done which were all within normal limits. Semen examination of the husband showed azoospermia.

Patient was taken for laparoscopic surgery. Intraoperatively there was a left ovarian tumor 6 x 6 cm which was solid, well encapsulated (Fig.1). The other ovary and uterus was normal and there were no deposits on the bowel wall, omentum or other viscera

Figure 1

Figure 1: Laparoscopic view of sclerosing stromal tumor of left ovary.



Laparoscopic peritoneal wash was done and sent for cytology. Left ovariotomy was performed and care taken that the ovary is removed intact in an endo bag which was introduced through a side port. The cut surface of the tumor

was homogeneous grayish- yellow with no areas of necrosis or hemorrhage.

Postoperative course was uneventful and the patient was discharged next day. The peritoneal cytology showed only mesothelial cells and no evidence of cancer. The gross specimen of left ovary showed a well defined homogenous tumor with intact capsule with no areas of hemorrhage or necrosis. The histopathological sections showed two types tumor cells, spindle cells & round cells, arranged in fascicles with predominant collagen formation by the tumor cells suggestive of sclerosing stromal tumor of ovary (Fig 2-4).

Figure 2

Figure 2: Tumor cells arranged in fascicles with thin wall branching blood vessels Inset: Hypocellular area with predominant collagen formation by tumor cells (H&E x10).

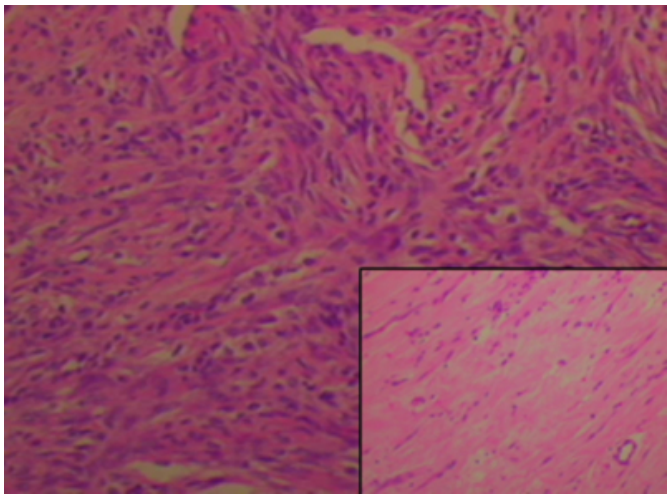


Figure 3

Figure 3: Tumor cells are of two populations. One population is of spindle cells with hyperchromatic nucleus along with moderate amount of cytoplasm. The other population of cells is round with clear cytoplasm which contains glycogen (H&E x20).

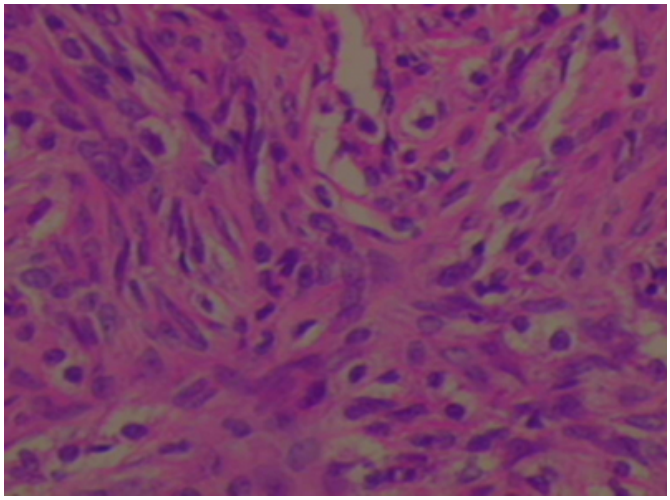
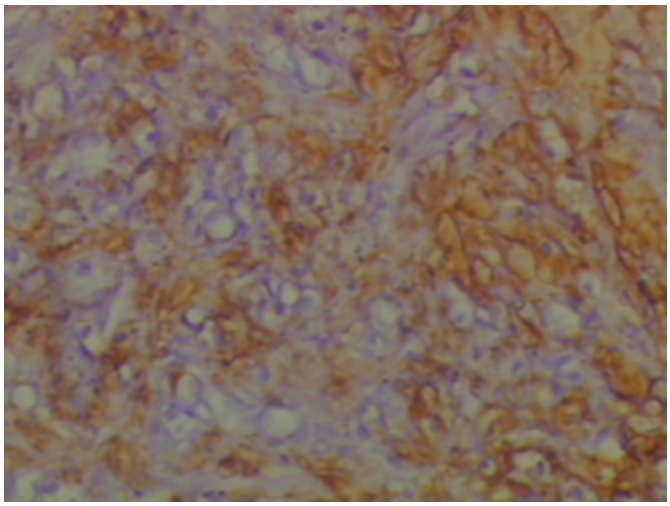


Figure 4

Figure 4: Tumor cells revealing diffuse immunoreactive to smooth muscle actin



CASE 2

A 25year old, para2, presented with complaints of pain lower abdomen for 3 years. She had regular menstrual periods. Her past history was insignificant. On examination her abdomen was soft. In per speculum examination, the cervix and vagina were healthy. In per vaginal examination, the uterus was anteverted, normal size. In the left adnexa, a mobile, nontender, 6x6 cm cyst was palpable. The right adnexa was free. Ultrasound showed a normal uterus and right ovary. The left adnexa showed a 6.1x5.6 cm mixed echogenic mass with areas of degeneration. There was no

free fluid in the pouch of Doughlas. It was suspected to be a solid ovarian tumor probably germ cell tumor (dermoid cyst). The CA125 was 30.36 IU/ml. Other tumor markers like -HCG, LDH and AFP all negative. The patient was prepared for laparoscopic surgery. Intraoperatively there was a left ovarian tumor 5 x 6 cm which was cystic with solid areas, well encapsulated and there was mucinous fluid. The other ovary and uterus was normal and there were no deposits on the bowel wall, omentum or other viscera. Laparoscopic peritoneal wash was done and sent for cytology. Left salpingo-ovariotomy was performed and care was taken to ensure the ovary is removed intact without spillage of tumor in an endo bag which was introduced through a side port. The cut surface of the tumor was homogeneous grayish- yellow with no areas of necrosis or hemorrhage.

Postoperative course was uneventful and the patient was discharged next day. The peritoneal cytology showed only mesothelial cells and no evidence of cancer. The gross specimen of left ovary showed a cystic and solid tumor with intact capsule. The solid area was pale, yellow, and homogenous with no papillary projections, with no areas of hemorrhaged or necrosis. The histopathological sections showed features compatible with sclerosing stromal tumor of ovary. Focal areas of calcification were also noted. Normal ovarian tissue was also seen. The fallopian tube was histologically unremarkable.

DISCUSSION

Sclerosing stromal tumor of the ovary is a rare benign neoplasm occurring in predominantly in young women and is histologically characterized by cellular heterogeneity and pseudo lobular architecture composed of cellular and hypocellular areas ([4],[5]).

Chalvardjian and Scully who described first ten cases, did not find convincing evidence of hormonal activity as only half of their patients had abnormal uterine bleeding ([1]), however, other investigators have described the presence of steroid function in this type of neoplasia resulting in menstrual disturbances, chronic anovulation and infertility ([3]). One of our patients had history of polymenorrhagia and serum markers of ovarian tumor – CA-125, -HCG, AFP and LDH were within normal limits, serum estradiol, progesterone and testosterone hormonal levels were not measured.

Due to the rarity of this particular ovarian neoplasia, it is not always possible to predict the presence of this tumor preoperatively, on the basis of clinical and sonographic findings. All of the sclerosing stromal tumor of the ovary reported in the literature were benign and were treated successfully by enucleation or unilateral ovariotomy. Our study demonstrates that such a benign lesion can be successfully treated by operative laparoscopy provided care is taken to avoid any spillage in the peritoneal cavity.

CORRESPONDENCE TO

Professor A Kriplani
Department of obstetrics and gynaecology
All India Institute of Medical Sciences,
New Delhi, INDIA

References

1. Chalvardjian A, Scully RE. Sclerosing stromal tumors of the ovary. Cancer 1973;31:664-70.
2. Damjanov I, Drobnjak P, Grizelj V,Longhino N. Sclerosing stromal tumor of the ovary: a hormonal and ultrastructural analysis. Obstet Gynaecol 1975;45(6):675-9.
3. Ho Yuen B, Robertson DI, Clement PB, Mincey EK. Sclerosing stromal tumor of the ovary.Obstet Gynaecol.1982; 60 :252-6.
4. Kawauchi S, Tsuji T, Kaku T, Kamura T, Nakano H, Tsunyoshi M. Sclerosing stromal tumor of the ovary: a clinicopathologic, immunohistochemical and cytogenetic analysis with special reference to its vasculature. Am J Surg Pathol 1998;22:83-92.
5. Scully RE, Young RH, Clement PB.Tumors of the ovary, maldeveloped gonads, fallopian tube, and broad ligament.Atlas of tumor pathology,3rd series, Washington; Armed Forces Institute of Pathology, 1998.

Author Information

Meenakshi Sharma, M.D.
Pool Officer, Department Of Obstetrics and Gynecology, All India Institute of Medical Sciences

Alka Kriplani, M.D.
Professor, Department Of Obstetrics and Gynecology, All India Institute of Medical Sciences

Pradeep Garg, M.D.
Assistant Professor, Department Of Obstetrics and Gynecology, All India Institute of Medical Sciences

Bhawna Malhotra, M.D.
Pool Officer, Department Of Obstetrics and Gynecology, All India Institute of Medical Sciences

S. Savithrisowmya, M.D.
Senior Resident, Department Of Obstetrics and Gynecology, All India Institute of Medical Sciences

Neerja Bhatla, M.D.
Additional Professor, Department Of Obstetrics and Gynecology, All India Institute of Medical Sciences