Case Report

Sclerosing Stromal Tumor in an Elderly Postmenopausal Woman

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Sclerosing stromal tumor (SST) of the ovary is a rare tumor derived from the sex cord stroma. This tumor was first described by Chalvaridjian and Scully in 1973. SST of the ovary is prevalence of 1.5% to 6% of ovarian stromal tumors. Patients are most commonly diagnosed in their 20s and 30s. There have been reports of SST postmenopausal women aged 65-, 67-, and 71 in the Republic of Korea; however, no report of this disease has been reported in women older than 80. In this study, we would like to report an 80-year-old postmenopausal woman who did not previously complain of any symptoms, and was finally diagnosed with SST. She was involved in a traffic accident, and huge pelvic mass was found during the evaluation of intra-abdominal hemorrhage. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was performed; a final pathologic diagnosis reported SST. (J Menopausal Med 2014;20:80-83)

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adnexa gave blood supply to the mass. Therefore, it seemed more possible that the mass had originated from ovarian fibroma, or extrauterine leiomyoma of right adnexa. A polypoid mass about one centimeter was located posterior to the uterus, and also had small part of lower signal intensity within the mass. This one was not enhanced, which could be a sign of hemorrhaging. Ovaries were atrophied, and there was pelvic fluid collection in the pelvic cavity.

Operative findings: We started exploratory laparotomy with an impression of ovarian cancer, and total hysterectomy and bilateral salpingo-oophorectomy was done as a result. Small amount of ascites was seen in peritoneal cavity. A mass of 11 cm diameter originating from the right ovary was confirmed (Fig. 2), and the uterus seemed slightly enlarged. There was no palpable lymph node or nodule in the peritoneal cavity.

Pathologic findings: Pathologic gross finding showed that large pelvic mass (Fig. 3A), and microscopic surface area (Fig. 3B), Cut surface showing vague pseudolobulation with focal yellowish areas.

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**Fig. 1.** T1 weighted magnetic resonance axial and sagittal imaging shows 9 × 10.5 × 10 cm sized large mass in the pelvic cavity.

**Fig. 2.** Operative finding shows right ovarian mass.

**Fig. 3.** Pathologic gross finding of large pelvic mass and microscopic surface finding. (A) Gross finding. (B) Cut surface showing vague pseudolobulation with focal yellowish areas (H & E, ×100).
Discussion

Sclerosing stromal tumor (SST) was first reported by Chalvaridjian and Scully in 1973. SST of the ovary is an extremely rare benign ovarian tumor of which the prevalence is from 1.5% to 6%, and occurs frequently in the second and third decades. Patients who have this kind of tumor may have irregular menstruations, menorrhagia, or lower abdominal pain. Therefore, when a clinician see young women express any of these symptoms, clinicians may think of SST as one of the differential diagnosis. However, it is far more difficult to diagnose SST in elderly women for many reasons; the incidence is much lower in elderly women, symptoms related to menstruation cycle can be hidden due to patients’ menopause, and various common conditions can cause non-specific abdominal pain in senior populations. Final diagnosis of SST is usually confirmed after pathologic examination after surgery. SSTs usually have portions with higher cellularity, stromal portion dominantly with collagen, and edematous portion, so that pathologists can distinguish it from fibroma, thecoma, or lipid cell tumors.

Most of the SSTs are non-functioning tumors, which do not manipulate endocrinial function. SSTs are usually found in the second to third decades, not like other kinds of stromal tumors of which the prevalence is high in the fifth or sixth decades. It is usually in the solid shape which is well demarcated from surrounding tissue. Histologically, there is no hyaline degeneration which is quite common in fibroma or thecoma, angioproliferative, and pseudolobulation due to focal edema. It shows histological difference with sex-cord stromal tumor by rare epithelial component and high in mesenchymal component. Patients usually complain irregular menstruation, hypermenorrhea, or abdominal or pelvic pain, but still non-symptomatic patients exist even before menopause. Postmenopausal women generally do not experience any symptoms like this case, however there have been several cases with prolonged vaginal bleeding after menopause or cystic endometrial hyperplasia. It is very rare to be found in both ovaries and right ovary is more susceptible to this tumor, showing 71% of cases to be found on right ovary. Chalvardjian and Scully studies ten patients who showed abnormal menstrual symptoms and dysfunctional uterine bleeding but with no evidence of hormonal imbalance, However, Damajanov reported steroidal hormonal imbalance in SST patients, and normalization of urinary secretion of estrogen and androgen after resection of the SST. Some cases showed elevation of CA-125, but SSTs are considered to be benign tumors which can be cured by oophorectomy or ovarian cystectomy, and recurrence or metastasis have not been reported. SSTs are rare diseases; therefore in most of the cases, no hormonal evaluation is done before surgery. Differential diagnosis of malignant tumors is necessary, especially in elderly patients since SSTs are rare in senior patients, Ascites is very rare in this tumor. There is no certain pathognomonic ultrasonographic findings. T2 weighted image of MRI shows high signal of stromal part and scattered small nodule of low signal, which is pathognomonic image of pseudolobulation. Severe ovarian edema or Krukenberg tumor should be excluded pathologically by nuclear dyplasia.

There have been ten cases of SST reported in Republic of Korea. However, it is rare to find SST in eighties, and it is the first case in Republic of Korea. SST is very hard to differentiate from other malignant tumors, so histological study must be done to diagnose SST in senior patients. This case shows a pelvic mass found in elderly patients could be a benign tumor such as SST, even when it seems malignant in imaging studies.

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References

1. Chalvardjian A, Scully RE, Sclerosing stromal tumors of the ovary, Cancer 1973; 31: 664–70.
2. Iravanloo G, Nozarian Z, Sarrafpour B, Motahhary P, Sclerosing stromal tumor of the ovary, Arch Iran Med 2008; 11: 561–2.
3. Youm HS, Cha DS, Han KH, Park EY, Hyon NN, Chong Y, A case of huge sclerosing stromal tumor of the ovary
weighing 10 kg in a 71-year-old postmenopausal woman, J Gynecol Oncol 2008; 19: 270–4.
4. Peng HH, Chang TC, Hsueh S, Sclerosing stromal tumor of ovary, Chang Gung Med J 2003; 26: 444–8,
5. Ho Yuen B, Robertson DI, Clement PB, Mincey EK, Sclerosing stromal tumor of the ovary, Obstet Gynecol 1982; 60: 252–6,
6. Matsubayashi R, Matsuo Y, Doi J, Kudo S, Matsuguchi K, Sugimori H, Sclerosing stromal tumor of the ovary: radiologic findings, Eur Radiol 1999; 9: 1335–8,
7. Chang YW, Hong SS, Jeen YM, Kim MK, Suh ES, Bilateral sclerosing stromal tumor of the ovary in a premenarchal girl, Pediatr Radiol 2009; 39: 731–4,
8. Shin CS, Kim JJ, Yun CS, Cho HJ, Bae KH, Han KS, et al, A case of sclerosing stromal tumor of the ovary, Korean J Obstet Gynecol 2003; 46: 1818–22,
9. Tang MY, Liu TH, Ovarian sclerosing stromal tumors, Clinicopathologic study of 10 cases, Chin Med J (Engl) 1982; 95: 186–90,
10. Marelli G, Carinelli S, Mariani A, Frigerio L, Ferrari A, Sclerosing stromal tumor of the ovary, Report of eight cases and review of the literature, Eur J Obstet Gynecol Reprod Biol 1998; 76: 85–9,
11. Damajanov I, Drobnjak P, Grizelj V, Longhino N, Sclerosing stromal tumor of the ovary: A hormonal and ultrastructural analysis, Obstet Gynecol 1975; 45: 675–9,
12. Joja I, Okuno K, Tsunoda M, Takeda Y, Sugita K, Mizutani Y, et al, Sclerosing stromal tumor of the ovary: US, MR, and dynamic MR findings, J Comput Assist Tomogr 2001; 25: 201–6.