European Review for Medical and Pharmacological Sciences 2012; 16(4 Suppl): 30-31

Unusual case of extraovarian granulosa cell tumor

H.E. SOYDINC, M.E. SAK, M.S. EVSEN, Y. BOZKURT*, A. KELES**

Department of Gynecology and Obstetrics, *Department of Urology, and **Department of Pathology; Dicle University School of Medicine, Diyarbakir, Turkey

Abstract. – We present a case of adult type extraovarian granulosa cell tumor in 22 years old woman. The pelvic and radiographic examination revealed right adnexial solid mass in patient who complaining from menstruel disregulation and pelvic pain. The patient underwent exploratory laparotomy which showed pelvic mass adjacent urinary bladder and fixed to the behind of pubic bone at pre-peritoneal area.

Key Words:
Pelvic mass, Extraovarian, Granulosa cell tumor.

Introduction

The ovarian granulosa cell tumor (GCT) comprises 2-3% of all ovarian neoplasms[1]. This neoplasm is classified as a sex-cord stromal tumor of the ovary. Histopathological examination of GCT distinguish two subtypes that: an adult type GCT that is found typically in older women and a juvenile type GCT that is recognized primarily in children and young adults[2]. Adult GCT is usually seen in pre- and post-menopausal women and the median age of onset of adult GCT is 50 years[3]. Extraovarian granulosa cell tumor (EGCT) is a more uncommon tumor than the primary ovarian type. In the English language literature, only a few numbers of cases have been presented so far and all of them were pre- and post-menopausal period. This case is the first with a different localization adjacent urinary bladder fixed to the area behind the pubic bone in preperitoneal area and is the first case of a young woman with adult EGCT.

Case Report

A 22 year-old woman, gravida 3, para 3, was referred with signs of an adnexal mass and complaints of pelvic pain and menstrual dysregulation over the last five months. Before that time, her medical history was normal. Although the pelvic examination revealed a normal size and shape of the uterus and left ovary, a right pelvic mass was found, which was probably fixed to the area behind the pubic bone. The tumor markers including CA 125, CA 19-9, CA 15-3, AFP, CEA, inhibin, and other laboratory results including hormone profile, were found in normal ranges. Cervical cytology findings were normal. Ultrasonography (USG) and Magnetic Resonance Imaging (MRI) showed a 8 × 6 cm sized solid-cystic mass that, in all probability, had originated from the right ovary and was adjacent to the urinary bladder on the left side. Cystoscopy was performed because of the neighboring with the urinary bladder and did not detect any pathology related to the urinary bladder. Endometrial biopsy showed secretory endometrium.

The patient underwent laparotomy due to the pelvic mass. In the exploratory laparotomy, no pathological findings related to the uterus or both ovaries were observed. However, the laparotomy showed a solid mass which was adjacent urinary bladder fixed to the area behind the pubic bone protruded from the preperitoneum into the pelvic cavity (Figure 1). The mass was completely removed. The postoperative pathological examination of the mass was reported as an adult type of EGCT (Figure 1).

Discussion

The extraovarian granulosa cell tumor (EGCT) originates from locations outside of the ovary and is extremely rare. The signs and symptoms of EGCT are, based on a review of presented cases in the literature, similar to those of GCT. These symptoms include pelvic mass, irregular vaginal bleeding, postcoital bleeding, and hemiperitoneum. Patients may present with vaginal bleeding due to the ability of the tumor to secrete estrogen or with abdominal pain, hemoperitoneum and hypotension resulting from rupture of the tumor[4]. A few cases of EGCT have been previously re-

Corresponding Author: Hatice Ender Soydınc, MD; e-mail: endersoydinc@hotmail.com

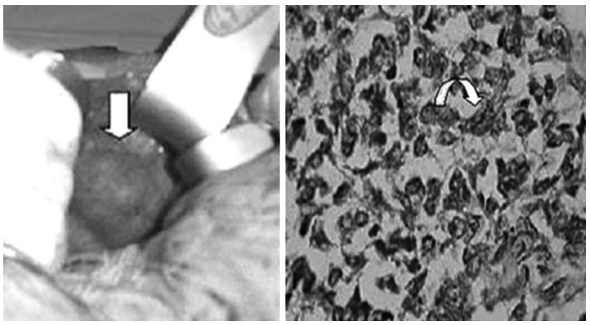

Figure 1. The pelvic mass fixed posterior site of pubic bone and strict adjacent uranary bladder on left figure (*straight arrow*).The microscopic image of groved on right figure (H&E, 100 × 10) (*curved arrow*).

ported. The locations of these have been described as the broad ligament, retroperitoneum, and adrenal gland[5]. USG and MRI showed a abdominopelvic tumor, but the definitive diagnosis in cases was performed with postoperative histopathological examination. Our case presented classically with an adnexal mass, pelvic pain and menstrual dysregulation, and exploratory laparotomy revealed pelvic mass adjacent to urinary bladder and fixed to the posterior pubic bone in the preperitoneal area. Definitive diagnosis was performed postoperative histopathological examination as in previously published cases.

The mechanism of generation of this neoplasm has not yet been explained. EGCT can occur even in patients who had oophorectomy for any reason other than GCT[6]. Some Authors have suggested that EGCT may be derived from the mesenchyme of the genital ridge in locations other than the ovary[7]. In our case, EGCT was adjacent to trigone of the bladder and in the preperitoneal area. The trigone of the bladder is embryologically derived from the caudal end of mesonephric ducts[8]. In embryonic life, the primordium of the adrenal cortex, the mesonephric duct and the genital ridge are in the same area and originate from the mesoderm. We thought that, in all likelihood, these structures associated with the EGCT and originated from the mesoderm may have the ability to differentiate into GCT.

The first choice for treatment of GCT is surgery. In postmenopausal women, the eligible surgical treatment is a total abdominal hysterectomy with bilateral salpingo-oophorectomy, because most patients with GCTs present with stage I disease. However, in patients with stage I disease and those of reproductive age, conservative surgery is applied, including unilateral salpingo-oophorectomy[3]. This neoplasm necessitates a prolonged follow-up due to its feature of late recurrences. Our patient was a young woman with an extraovarian pelvic mass and her each ovaries were normal. Therefore, only the pelvic mass was totally removed as surgical treatment and not performed oopherectomy, because she was a young women. During the postoperative period, the patient was called for episodic control, because her histopathological diagnosis was adult GCT which can make late reccurrence.

References

1) Young RH and Scully RE. Sex cord-stromal, steroid cell, and other ovarian tumors with endocrine, paraendocrine, and paraneoplastic manifestations. In: Kurman RJ (ed). Blaustein's pathology of the female genital tract. New York, Springer-Verlag; 1994, pp. 783-848.
2) Geetha P, Nair MK. Granulosa cell tumours of the ovary. Aust N Z J Obstet Gynaecol 2010; 50: 216-220.
3) Koukourakis GV, Kouloulias VE, Koukourakis MJ, Zacharias GA, Papadimitriou C, Mystakidou K, Pistevou-Gompaki K, Kouvaris J, Gouliamos A. Granulosa cell tumor of the ovary: tumor review. Integr Cancer Ther 2008; 7: 204-215.
4) Schumer ST, Cannistra SA. Granulosa cell tumour of the ovary. J Clin Oncol 2003; 21: 1180-1189.
5) Paul PC, Chakraborty J, Chakrabarti S, Chattopadhyay B. Extraovarian granulosa cell tumor. Indian J Pathol Microbiol 2009; 52: 231-233.
6) Keitoku M, Konishi I, Nanbu K, Yamamoto S, Mandai M, Kataoka N, Oishi T, Mori T. Extraovarian sex cord-stromal tumor: case report and review of the literature. Int J Gynecol Pathol 1997; 16: 180-185.
7) Robinson JB, Im DD, Logan L, McGuire WP, Rosenshein NB. Extraovarian granulosa cell tumor. Gynecol Oncol 1999; 74: 123-127.
8) Larsen WJ, Sherman LS, Potter SS, Scott WJ. Development of the urogenital system. In Sherman LS, Potter SS, Scott WJ (eds). Human Embryology. Philadelphia, Churchill Livingstone; 2001, pp. 265-310.