Tzu Chi Medical Journal 28 (2016) 84–85

Contents lists available at ScienceDirect

Tzu Chi Medical Journal

journal homepage: www.tzuchimedjnl.com

Pathology Page

Granulosa cell tumor of the ovary

Cheng-Fa Chou [a], Wen-Chih Huang [a, b, *]

[a] Department of Anatomic Pathology, Far Eastern Memorial Hospital, New Taipei, Taiwan
[b] College of Nursing, National Taipei University of Nursing and Health Sciences, Taipei, Taiwan

ARTICLE INFO

Article history:
Received 29 January 2016
Received in revised form
2 February 2016
Accepted 4 February 2016
Available online 27 March 2016

A 38-year-old woman who had regular follow-up for infertility and had received two failed *in vitro* fertilizations was examined in our clinic. She had a history of diabetes mellitus and hypertension and had surgery for a double uterus several years ago. Sonography of the right ovary revealed a 10 cm cystic tumor. Right ovarian cystectomy was performed and an ovarian cystic tumor with

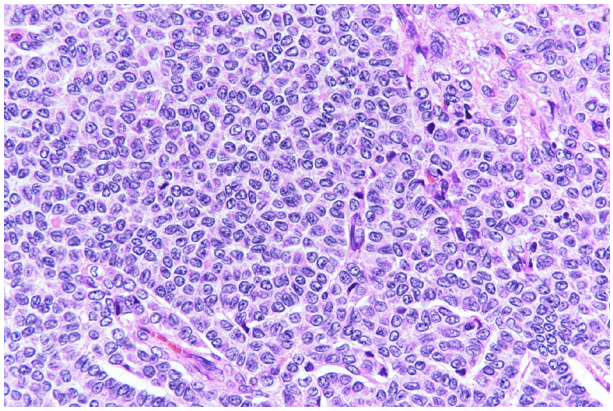

Fig. 2. Tumor cells with nuclear grooves are present (hematoxylin-eosin stain, ×400).

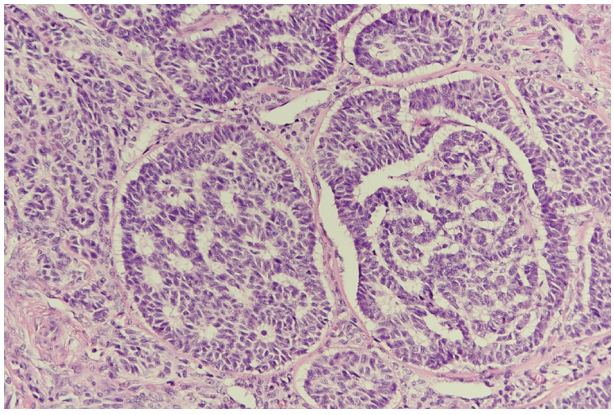

Fig. 1. Histopathology reveals tumor cells in trabecular, solid, microfollicular patterns and Call-Exner bodies (hematoxylin-eosin stain, ×200).

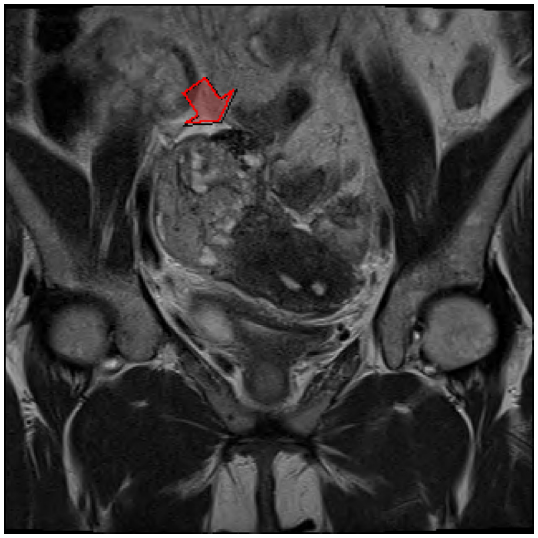

Fig. 3. Magnetic resonance imaging shows a multilocular cystic tumor.

Conflict of interest: none.

* Corresponding author. Department of Anatomic Pathology, Far Eastern Memorial Hospital, 21, Section 2, Nanya South Road, New Taipei, Taiwan. Tel.: +886 2 77282073; fax: +886 2 77282060.
E-mail address: pathology.taipei@gmail.com (W.-C. Huang).

http://dx.doi.org/10.1016/j.tcmj.2016.02.002

pelvic adhesions was noted. Histopathologic examination revealed polygonal tumor cells with occasional nuclear grooves in trabecular, solid, microfollicular patterns and Call-Exner bodies (Figs. 1 and 2). The cells were diffusely positive for alpha-inhibin and CD99, and focally positive for pancytokeratin. An adult type granulosa cell tumor (GCT) was diagnosed. Magnetic resonance imaging showed a residual multilocular cystic tumor in the right ovary (Fig. 3). She received a salpingo-oophorectomy and a GCT, FIGO Stage IC1, was present in the residual ovary. Adjuvant chemotherapy was suggested due to incomplete resection. She has received further chemotherapy and follow-up for 7 months.

A GCT is one type of sex cord-stromal tumor, and comprises 2–5% of ovarian malignancies. GCTs occur in patients over a wide age range and can be divided into adult (95%) and juvenile (5%) types. The adult subtype commonly occurs in postmenopausal women. It can have a late recurrence, and has been detected > 20 years after the initial diagnosis. The juvenile type usually occurs in the first 3 decades. Patients present with abdominal distension, menorrhagia, and metrorrhagia, related to hyperestrogenism. For Stage IA patients, surgery alone is the acceptable treatment. For Stage IC to IV disease, there is no standard therapy. Some groups recommend platinum-based chemotherapy, while others do not recommend postoperative therapy and treat only after a tumor recurrence. The pelvis is the most common site of recurrence. The prognosis depends upon the stage of disease at diagnosis. Unfavorable factors include bilateral tumors, tumor rupture, and advanced stage.

Further reading

[1] Schumer ST, Cannistra SA. Granulosa cell tumor of the ovary. J Clin Oncol 2003;21:1180–9.
[2] Zhang M, Cheung MK, Shin JY, Kapp DS, Husain A, Teng NN, et al. Prognostic factors responsible for survival in sex cord stromal tumors of the ovary–an analysis of 376 women. Gynecol Oncol 2007;104:396–400.
[3] Uygun K, Aydiner A, Saip P, Kocak Z, Basaran M, Dincer M, et al. Clinical parameters and treatment results in recurrent granulosa cell tumor of the ovary. Gynecol Oncol 2003;88:400–3.