J Surg Med. 2019;3(10):772-773.
DOI: 10.28982/josam.560112

Journal of Surgery and Medicine
e-ISSN: 2602-2079

Extraovarian granulosa cell tumor: A case report

Ekstraovaryen granulosa hücreli tümör: Olgu sunumu

Abdelouhab El Marouni [1], Karam Aziz [1], Imane Toughrai [1], Khalid Mazaz [1], Karim Ibn Majdoub Hassani [1]

[1] Visceral Surgery Service, Hassan II University Hospital, Faculty of Medicine and Pharmacy of Fez, sidi Mohamed Ben Abdullah University, Fez, Morocco

ORCID ID of the author(s)

AE: 0000-0003-2035-7982
KA: 0000-0002-3330-7311
IT: 0000-0003-0401-3012
KM: 0000-0001-7779-7802
KIMH: 0000-0002-0421-7296

Abstract

Granulosa cell tumor (GCT) of the ovary is a rare tumor representing 2 to 5% of all ovarian neoplasms. It can reproduce or metastasize several years after the initial treatment. In rare cases, CGT can develop on an extra-ovarian site, which is thought to originate from ectopic gonadal tissue along the embryonic genital ridge. We herein present a case of extraovarian granulosa tumor, the clinical and therapeutic aspects, and our approach.

Keywords: Extraovarian, Granulosa cell tumor, Histological diagnosis

Öz

Overin granuloza hücreli tümörü (GCT), tüm over neoplazmalarının %2-5'ini oluşturan nadir bir tümördür. Tedaviden birkaç yıl sonra yeniden ortaya çıkabilir veya metastaz yapabilir. Sık olmamakla birlikte, embriyonik genital katlantı üzerindeki ektopik gonadal dokudan köken alarak, ekstra-overyen bir bölgede de görülebilir. Burada bir ekstraovaryen granüloza tümörünü, klinik, terapötik yönleri ve kendi yaklaşımımızla birlikte sunuyoruz.

Anahtar kelimeler: Ekstraovaryan, Granulosa hücreli tümör, Histolojik tanı

Introduction

Tumors of adult granulosa cells are considered as sexual tumors of the cord and ovary [2]. There is considerable debate about the cellular origin of these tumors. In the literature, several cases of extraovarian tumors with granular cells have been reported [3].

Corresponding author / Sorumlu yazar:
Abdelouhab El Marouni
Address / Adres: Visceral Surgery Service, Hassan II University Hospital, Faculty of Medicine and Pharmacy of Fez, sidi Mohamed Ben Abdullah University, Fez, Morocco
e-Mail: elmarouniabdelouhab@hotmail.fr

Informed Consent: The authors stated that the written consent was obtained from the patient presented with images in the study.
Hasta Onamı: Yazar çalışmada görüntüleri sunulan hastadan yazılı onam alındığını ifade etmiştir.

Conflict of Interest: No conflict of interest was declared by the authors.
Çıkar Çatışması: Yazarlar çıkar çatışması bildirmemişlerdir.

Financial Disclosure: The authors declared that this study has received no financial support.
Finansal Destek: Yazarlar bu çalışma için finansal destek almadıklarını beyan etmişlerdir.

Published: 10/18/2019
Yayın Tarihi: 18.10.2019

How to cite / Atıf için: El Marouni A, Aziz K, Toughrai I, Mazaz K, Hassani KIM. Extraovarian granulosa cell tumor: A case report. J Surg Med. 2019;3(10):772-773.

Case presentation

A 66-year-old female patient with no significant pathological history presented with severe abdominal pain. Physical examination revealed the presence of a large mass at the left flank. An abdominopelvic scan showed the presence of two large ganglionic clusters measured respectively at 13 and 11 cm, the first one extending from the subcarinal region to the renal hilum, and the second one extending along the left psoas muscle (Figure 1). Histopathological examination of the biopsy (confirmed by immunohistochemistry) revealed adult granulosa cell tumor characteristics (Figure 2). Patient was diagnosed with extra-ovarian GCT, and therapeutic strategy was based on chemotherapy.

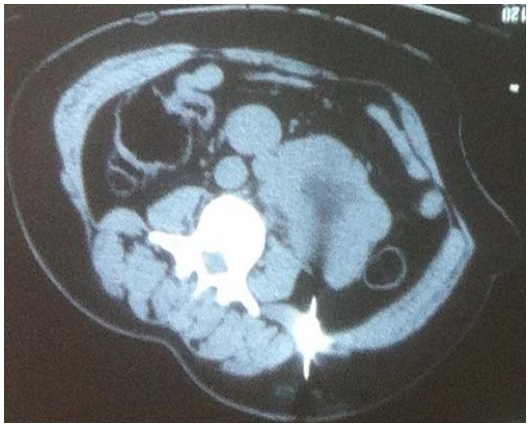

Figure 1: CT image shows the location of the granular tumor

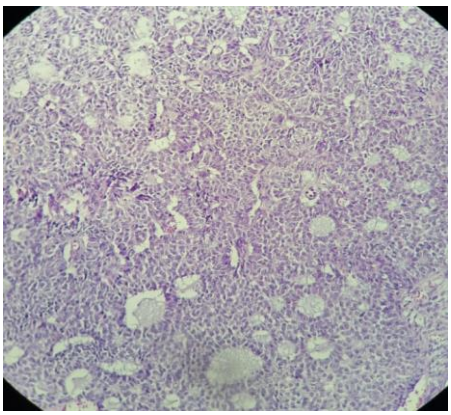

Figure 2: Microscopic image shows the histological appearance of the extraovarian granulosa tumor

Discussion

An uncommon ovarian cancer [1], adult and juvenile type GCTs exhibit different clinical and histological features. The more common adult type of GCT usually presents during the perimenopausal or the early menopausal period, the median age of diagnosis being 50-54 years [1]. GCT patients require long-term follow-ups with proper history-taking, physical examination, and tumor marker studies because 17% of relapses occur more than 10 years after diagnosis [3]. The most common site of recurrence is the pelvis. Rarely, extraovarian GCT can develop. Eight such cases have so far been reported in the English literature until 2001 [3], one of which was from India [5]. The tumors of four cases originated from the broad ligament, three from the retroperitoneum and one from the adrenal gland [3]. Recently, one case of GCT arising in a Müllerian cyst of the broad ligament has been reported [6].

The histogenetic origin of extraovarian sex-cord stromal tumors is considered as the ectopic gonadal stromal tissue, with the sex-cord originating from the mesonephros. A dual origin theory from both coelomic epithelium and mesonephros has also been proposed [7]. Mesonephros or its influence seems necessary for creating the sex-cord. This may explain why the sites of extraovarian sex-cord stromal tumors being limited to the broad ligament, the retroperitoneum, and the adrenal gland, all of which differentiate close to the mesonephros and the mesonephric duct [7]. The morphological differential diagnosis of GCT includes undifferentiated carcinoma, small cell carcinoma and endometrial stromal sarcoma [1]. However, characteristic histological findings and immunostaining are helpful in definitive diagnosis.

Several tumor markers are used for confirmation of histologic diagnosis of GCT, an important one being inhibin. The ovary is the only source of inhibin in non-pregnant woman whereas in pregnancy, it is also secreted from the placenta. It is reportedly a more reliable marker for GCT than estradiol. Although an elevated inhibin level may be observed in some epithelial ovarian cancers, confirmation is based on EMA positivity, which is negative in GCT [10].

Our patient presented with two separate intraabdominal ganglionic clusters, which is unusual for a primary tumor. GCT can recur or metastasize years after initial diagnosis and treatment, hence the strong possibility of metastatic deposit in intraabdominal sites. As slides of the excised ovaries were not available for thorough review, the possibility of late metastasis of a low-grade GCT could not be evaluated, and the diagnosis of extraovarian GCT was deemed most appropriate.

Conclusion

Tumors of adult granulosa cells are considered sexual tumors of the cord and ovary, which poses a diagnostic problem. A diagnosis of an extraovarian GCT can be made by excluding any history of ovarian GCT.

References

1. Schumer ST, Cannistra SA. Granulosa cell tumour of the ovary. J Clin Oncol. 2003;21:1180-9.
2. Serov SF, Scully RE, Sobin LH: International Histological Classification of Tumours, No. 9. Histological Typing of Ovarian Tumors. Geneva, World Health Organization, 1973
3. Kim SH, Park HJ, Linton JA, Shin DH, Yang WI, Chung WY, et al. Extraovarian granulosa cell tumour. Yonsei Med J. 2001;42:360-3.
4. Cronjı HS, Niemand I, Bam RH, Woodruff JD. Review of the ¬granulosa-theca cell tumors from the emil Novak ovarian tumor registry. Am J Obstet Gynecol. 1999;180:323-7.
5. Reddy DB, Rao DB, Sarojini JS. Extraovarian granulosa cell tumour. J Indian Med Assoc. 1963;41:254-7.
6. Sakai Y. Granulosa cell tumor arising in the wall of müllerian cyst of the broad ligament: Report of a case and immunohistochemical study. Arch Gynecol Obstet. 2007;275:145-8.
7. Motta PM, Makabe S. Germ cells in the ovarian surface during fetal development in humans. J Submicrosc Cytol 1986;18:271-90.
8. Lal A, Bourtsos EP, Nayar R, DeFrias DV. Cytologic features of granulosa cell tumours in fluids and fine needle aspiration specimens. Acta Cytol. 2004;48:315-20.
9. Stenwig JT, Hazekamp JT, Beecham JB. Granulosa cell tumours of the ovary: A clinico-pathological study of 118 cases with long term follow-up. Gynecol Oncol. 1979;7:136-52.
10. Lappǫhn RE, Burger HG, Bouma J, Bangah M, Krans M, de Bruijn HW. Inhibin as a marker for granulosa-cell tumors. N Engl J Med. 1989;321:790-3.

This paper has been checked for language accuracy by JOSAM editors.
The National Library of Medicine (NLM) citation style guide has been used in this paper.

Suggested citation: Patrias K. Citing medicine: the NLM style guide for authors, editors, and publishers [Internet]. 2nd ed. Wendling DL, technical editor. Bethesda (MD): National Library of Medicine (US); 2007-[updated 2015 Oct 2; cited Year Month Day]. Available from: http://www.nlm.nih.gov/citingmedicine