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Granulosa Ovary Tumor: Case Report

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Abstract: Granulosa cell tumors of the ovary originate from sex cord-stromal cells. Complete surgical resection remains the cornerstone of therapeutic management. Chemotherapy is commonly indicated in cases of localized tumors with a high risk of recurrence, as well as in advanced or recurrent disease.

Keywords : *Cancer, Granulosa Tumor Chemotherapy, Ovary Cancer, Surgery*.

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I. INTRODUCTION

Granulosa cell tumors of the ovary (GCTs) are rare malignant neoplasms, accounting for 2–3% of all ovarian cancers, and occur predominantly in the adult population. They arise from the sex cords and stromal components of the ovary and are generally associated with a more favorable prognosis compared to epithelial ovarian cancers. GCTs primarily affect younger women and can recur even decades after the initial diagnosis, with reported recurrences up to 40 years later. [1] [2]

➢ *Patient and Clinical Observation*

We report the case of a 60-year-old female patient, postmenopausal for 10 years, with no significant medical history, who was admitted to our department for chronic pelvic pain. During the interview, the patient described persistent pelvic discomfort without any associated symptoms, evolving in a context of preserved general health. Clinical examination was unremarkable.

- Pelvic ultrasound revealed a solid-cystic mass with irregular and poorly defined contours, located on the right side, measuring 7.2 × 6.5 cm.
- The mass exhibited a thick wall, mixed echotexture, and disorganized vascularization on Doppler imaging.
- No free fluid was observed in the pouch of Douglas.

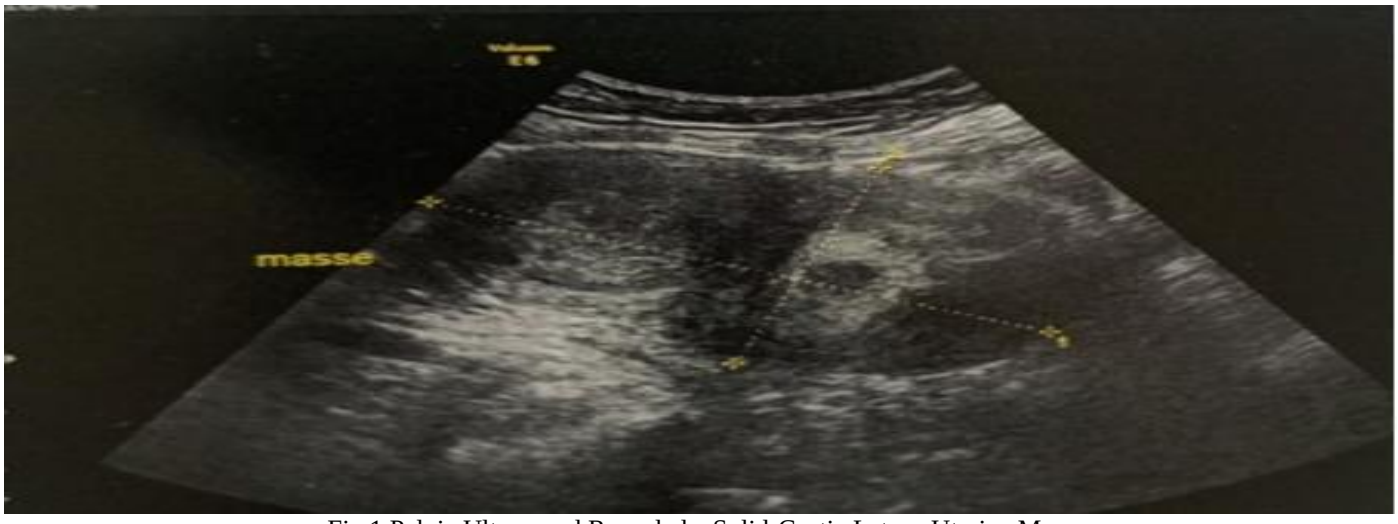

Fig 1 Pelvic Ultrasound Revealed a Solid-Cystic Latero-Uterine Mass

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Pelvic MRI revealed a poorly defined solid latero-uterine mass measuring 85 × 64 × 56 mm.

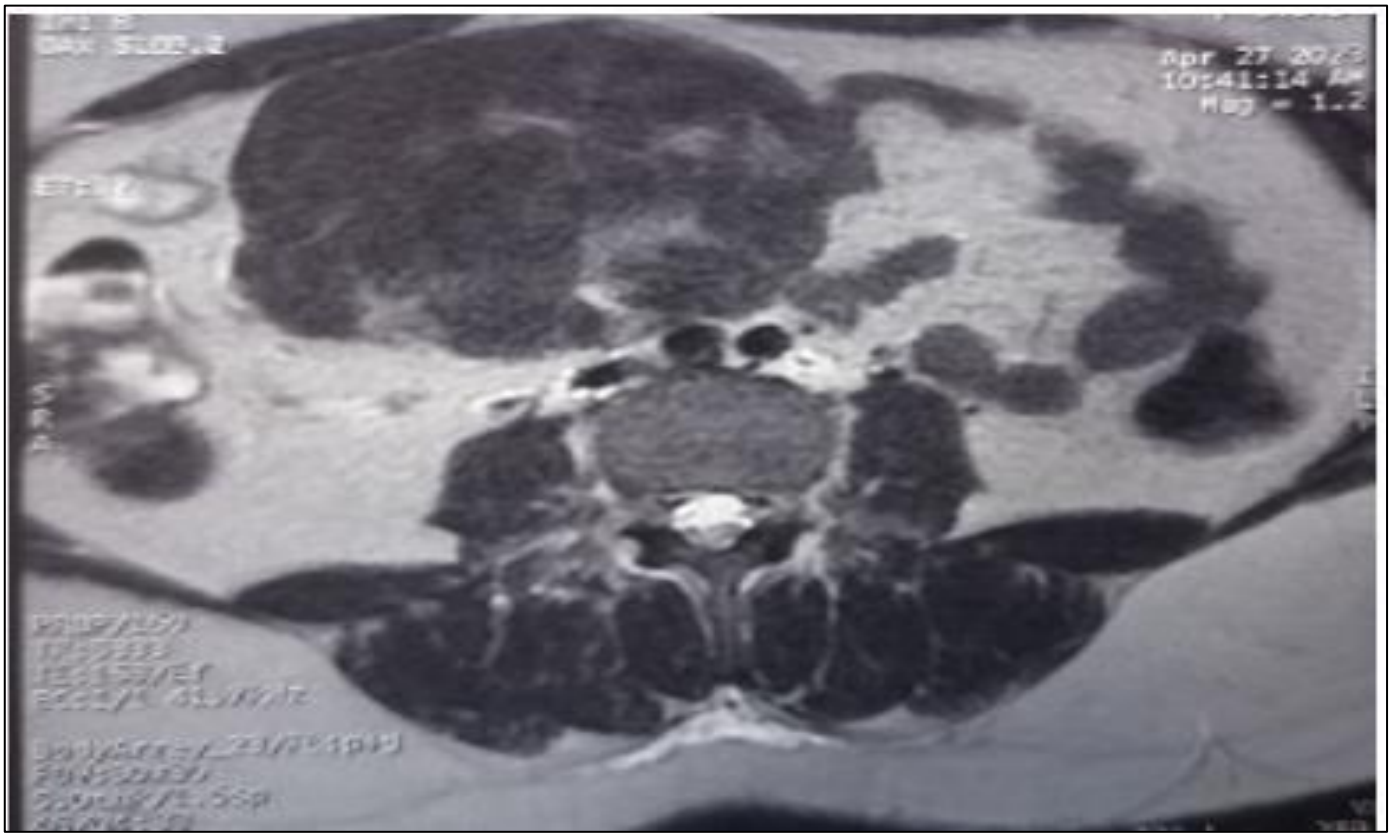

Fig 2 Axial Section of the Mass

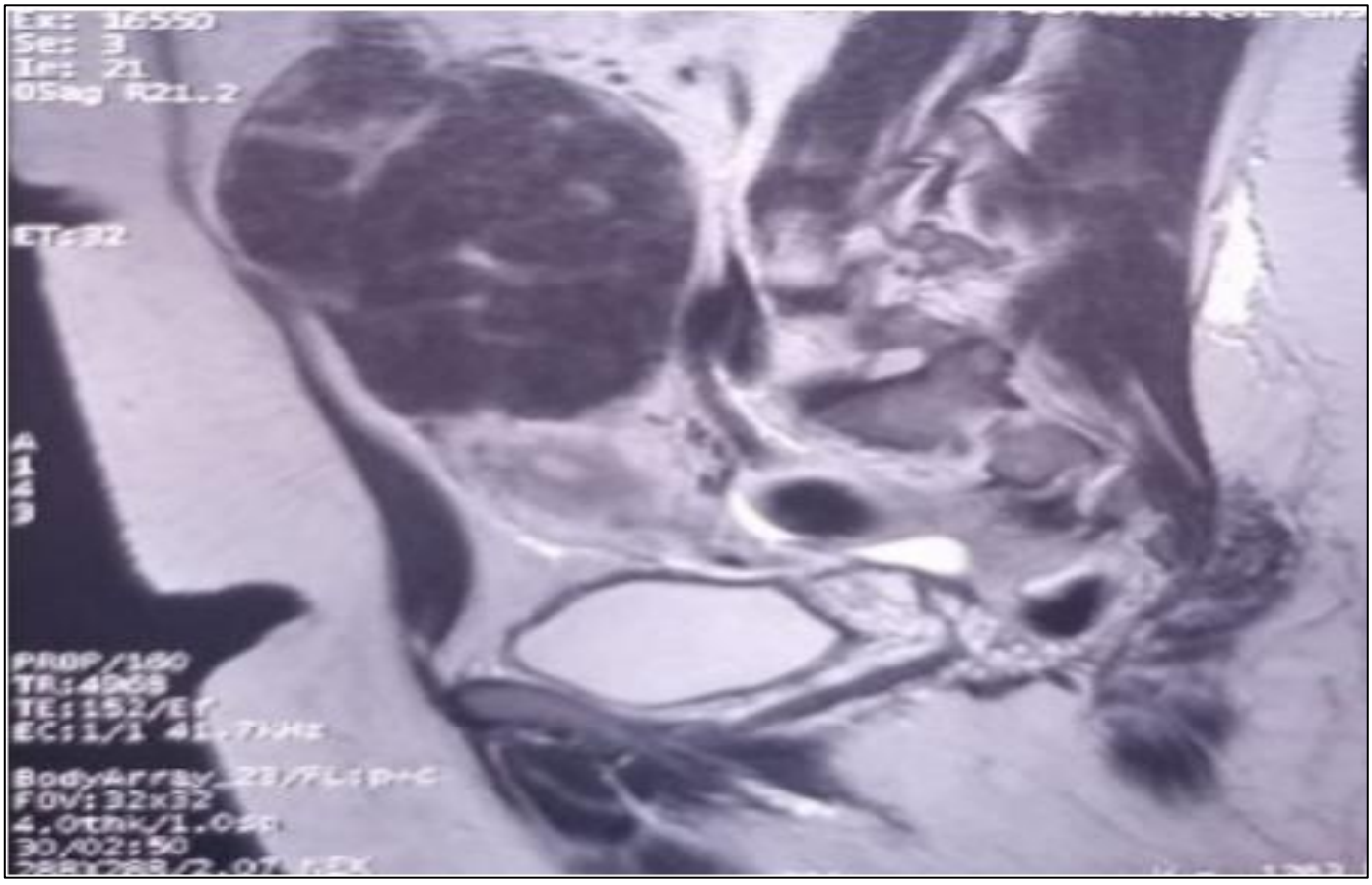

Fig 3 Sagital Section of the Mass

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Tumor markers showed a markedly elevated CA-125 level (5304 U/mL), while CA 19-9, CEA, and HE4 levels remained within normal limits.

A total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAH-BSO), along with peritoneal and omental biopsies, was performed via laparotomy.

Fig 4 Upon Exploratory Surgery

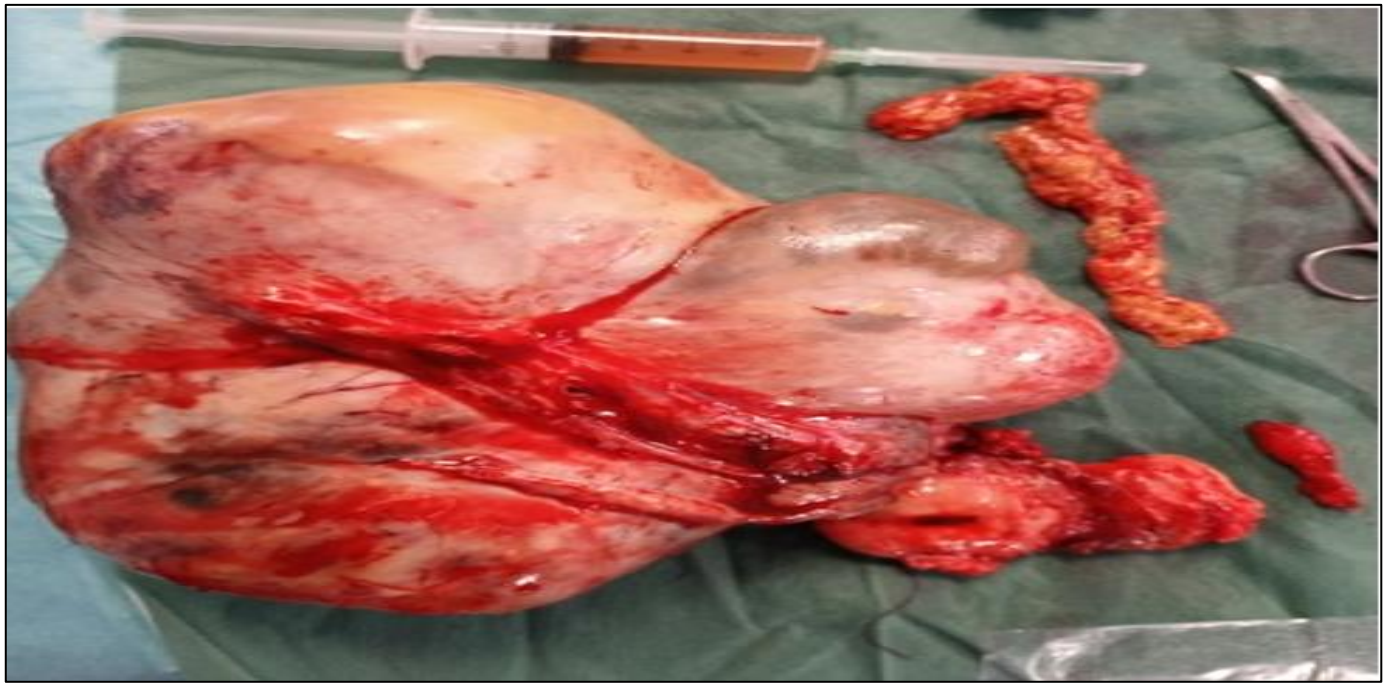

Fig 5 Operative Specimens

Histopathological examination concluded an adult-type granulosa cell tumor with endometrial hyperplasia without atypia.

The patient completed her treatment with adjuvant chemotherapy.

II. DISCUSSION

Two anatomo-clinical forms of granulosa cell tumors (GCTs) are distinguished: the adult form (95%), which most commonly occurs between 40 and 70 years of age, and the juvenile form (5%), which typically presents before the age of 20. These tumors exhibit a low degree of malignancy and generally have a favorable prognosis, although the juvenile form tends to be more aggressive[3][4]. Recurrences of granulosa cell tumors usually occur within five years [5].

Clinically, the symptomatology manifests as a tumor syndrome with painful abdominal distension, and an endocrine syndrome linked to hyperestrogenism. This may cause isosexual precocious pseudo-puberty in juvenile cases. During the perimenopausal period, this hyperestrogenism explains the endometrial hyperplasia, which may be atypical[6].

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Complete surgical excision (total hysterectomy with bilateral salpingo-oophorectomy) of the tumor following disease staging which includes omentectomy and peritoneal exploration with cytology and multiple peritoneal biopsie represents the cornerstone of treatment for granulosa cell tumors [7]. Lymphadenectomy is generally not performed due to the rarity of lymph node involvement[8].

Complete surgery after disease staging is considered the standard even for localized stages [9][10]. In cases of peritoneal recurrence, some teams complement surgical excision with intraperitoneal chemotherapy based on cisplatin[11].

Adjuvant treatments may be proposed in stage III and IV disease or in case of recurrence, including chemotherapy with carboplatin and paclitaxel, pelvic and/or abdominal radiotherapy, and sometimes hormonal therapy with aromatase inhibitors (AI) [12][13].

Several studies have reported the efficacy of hormonal treatments in GCTs, particularly luteinizing hormone-releasing hormone (LHRH) analogues, progestins, and aromatase inhibitors. Various hormonal manipulations have been proposed to inhibit tumor growth, especially in patients who relapse or progress despite chemotherapy and/or radiotherapy[14][15].

An initial platinum-based chemotherapy regimen was administered to four patients, while two patients were chemotherapy-naïve. Partial responses lasting between 3 and 11 months were observed in two patients, with a median response duration of 4 to 12 months. Three patients experienced tumor stabilization, resulting in an objective response rate of 40%[16][17].

The disease could not be evaluated in one patient; however, she received LHRH analogues for 24 months without clinical signs of tumor progression[18][19].

Our patient received treatment with aromatase inhibitors, achieving a clinical response lasting 12 to 24 months.

III. CONCLUSION

The progression of adult-type granulosa cell tumors is typically slow. However, their management primarily relies on surgical treatment.

Due to the potential for late recurrences, prolonged post-therapeutic surveillance is essential.

- *Ethical Approval :*
  Ethics approval has been obtained to proceed with the current study

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AUTHOR CONTRIBUTION

Maha LHALOUI, Hassnaa SARHANE, Kaoutar BAHIDA, Fatim zahra BELOUAZA, , : picture editing, manuscript editing, paper writing, data analysis

Najia ZRAIDI, Nisrine BENOUICHA, Amina ETBER, Aziz BAYDADA : littérature review, supervision

- *Guarantor*

The corresponding author is theguarantor of submission.

- *Research Registration Number :Not applicable.*

- *Consent*

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

- Availability of data and materials
- Supporting material is available if further analysis is needed.
- Declaration of competing interest
- The authors declare that they have no competing interests.