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Case Report

Adult granulosa tumor of the ovary about a case

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ABSTRACT

Granulosa tumors are rare tumors of the ovary (0.6 to 3%). They belong to the group of mesenchymal and sex cord tumors, and represent more than 70% of malignant tumors in this group and 5% of ovarian cancers. They present two histological forms: the juvenile form and the adult form, the most common, occurring mainly in women in the post-menopausal period. The solido-cystic appearance of these tumors is generally non-specific and the histological diagnosis can be confirmed by immunohistochemistry. Surgery remains the basis of treatment and must be extensive in elderly patients. The prognosis depends on the histological type and several parameters. We report the observation of a 53-year-old patient without known risk factors, who presented with a granulosa tumor of the left ovary diagnosed postoperatively. The epidemiological, clinical and therapeutic aspects are discussed.

Keywords: Granulosa tumor, Ovary, Cance

INTRODUCTION

Granulosa tumors are rare tumors of the ovary (0.6% to 3%) and account for 5% of all ovarian malignancies. It belongs to the group of tumors of the sex cords and stroma, of which it is the most frequent. It presents two histological forms: the adult form, the most frequent, occurring mainly in women in the post-menopausal period, characterized by hyperoestrogenism, and the juvenile form, occurring mainly in young girls, characterized by a tumoral syndrome and an endocrine syndrome (early pseudo-puberty iso sexual).[1-3] Diagnosis is essentially histological. This tumor has been little studied in black Africa, particularly in Senegal (13.7%). Prognosis depends on histological type and several parameters, including FIGO stage.[4]

CASE REPORT

Mrs. A. S, patient aged 53, GVII PVII, with no particular pathological history. She came to the emergency department with worsening pelvic pain that had been present for about three months, intermittent, paroxysmal, associated with increased abdominal volume and weight loss. Clinical examination revealed a tender, firm abdominopelvic mass measuring around 10 cm, and a peritoneal irritation syndrome.

Abdominopelvic ultrasonography revealed a nodulocystic mass of the left ovary with a hemorrhagic appearance measuring 104×93 m (Figure 1), associated with a moderate intraperitoneal effusion, with no deep adenopathy.

Tumor markers (CA 125, Alpha-fetoprotein and beta HCG) were not measured.

Surgical exploration revealed a 10 cm long, ruptured tumor, developed at the expense of the left ovary, with moderate hemoperitoneum. The liver, diaphragm and greater omentum were macroscopically intact. A total hysterectomy with bilateral adnexectomy was then performed.

Anatomopathological study of the surgical specimen (uterus + adnexa) revealed a tumor of the adult granulosa

of the left ovary infiltrating the homolateral tube, associated with simple endometrial hyperplasia without atypia. Immunohistochemistry confirmed an adult granulosa cell tumor.

Postoperative management was straightforward. The patient underwent periodic clinical and radiological monitoring. Follow-up was unremarkable. Following multidisciplinary consultation, it was decided that the patient would not require chemotherapy or radiotherapy.

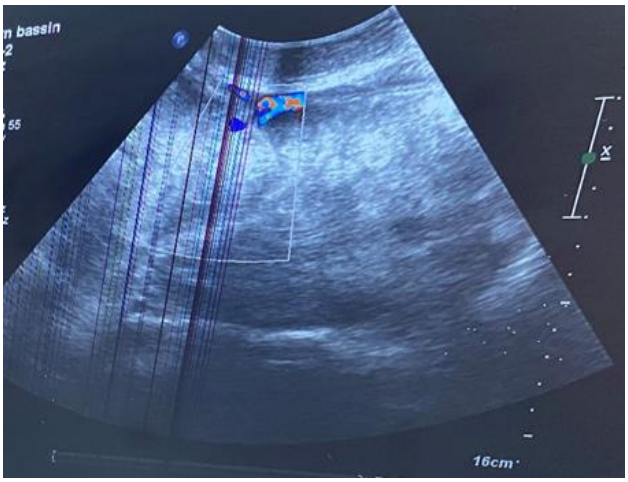

Figure 1: Ultrasound appearance of ruptured cystic tumor in our patient.

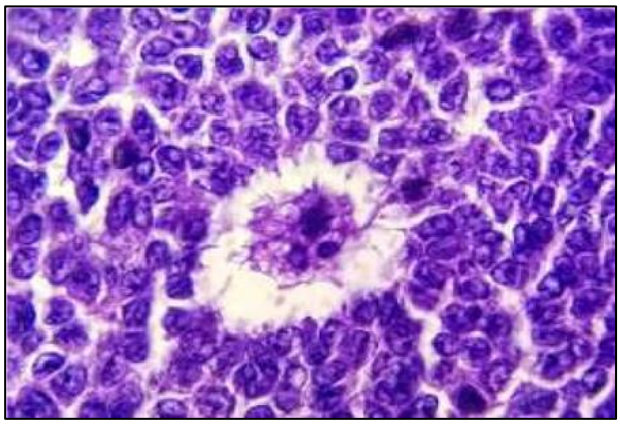

Figure 2: Hematoxylin-eosin staining. Magnification ×400. Diffuse proliferation of monomorphic cubic cells with incised "coffee-bean" nuclei and vesicular, finely nucleated chromatin. Central Call-Exner lacuna or body.

DISCUSSION

Granulosa tumors belong to the group of mesenchymal and sex cord tumors, accounting for over 70% of malignant tumors in this group and 5% of ovarian cancers. This neoplasia is relatively rare, but accounted for 13.7% of ovarian cancers in a study conducted in Dakar (Senegal) by Gaye et all between 2010 and 2017 with 28 cases. The adult form accounted for 93%. In Ghana, Der et al reported 16 cases of TG between 2013 and 2020, representing 16.3% of all ovarian cancers. The "adult" form generally occurs after the age of 30, and in 70% of cases after the menopause.[5,6]

Infertility and the use of ovulation inducers, as well as hormone replacement therapy after the menopause, appear to be risk factors for granulosa tumors. The use of oral contraception, combining estrogen and progestin, reduces the risk of ovarian cancer in general; however, the protective effect of the contraceptive pill is not significant when patients are compared with the general population.[7,8]

Parity does not appear to be a risk factor for TG. However, several studies in Africa and India, such as that by Gaye et all (71%), show that a significant proportion, if not the majority, of patients are multiparous.[4]

Granulosa tumors manifest as: a tumor syndrome: painful abdominal distension in proportion to the size of the tumor. Sometimes the pain is acute, resulting from torsion of the ovary their hemorrhagic nature. Exceptionally, granulosa tumors may present as a rupture with haemoperitoneum, due to their haemorrhagic nature.[8]

Ultrasound is the most widely used complementary examination for the investigation of ovarian tumours, enabling clinical findings to be confirmed, the pelvic mass to be related to its ovarian origin, its semiological characteristics to be determined, and the degree of abdominal and pelvic extension of the tumor to be assessed. Ultrasound may reveal a large echogenic mass (Figure 1), or a cystic mass with septations, giving a multilocular appearance, but a unilocular appearance is also found, or it may appear to be of a pure homogeneous or heterogeneous solid nature.[10]

In the presumptive diagnosis of ovarian tumors, CT may have a lower detection rate than ultrasound. It may be justified in the case of large pelvic tumors, which raises the question of their primary location and relationship to neighboring anatomical structures. The information provided by MRI does not appear to be superior to that of pelvic ultrasound performed under excellent technical conditions by an experienced sonographer.[9] Our patient's ultrasound confirmed the adnexal origin of a nodulocystic mass.

The diagnosis of this condition is histological and is based essentially on morphology. It consists of tumor cells that resemble normal granulosa cells. They are small, round, cubic or spindle-shaped, with pale, poorly defined cytoplasm. The nucleus is rounded or oval and the chromatin is fine, associated with a single small nucleolus. Longitudinal incisions are present in most nuclei and are characteristically "coffee-bean" or Call-Exner bodies (Figure 2). Mitoses, atypia and nuclear pleomorphism are unusual, but can be seen. Typically, the mitotic index is less than two mitoses per ten fields at high magnification. Tumor cells are luteinized in around 1% of TGs.

The main immunohistochemical markers expressed by these tumors are vimentin, CD99 and alpha-inhibin.[4]

Treatment is essentially based on surgical excision. The attitude is similar to that of epithelial tumors, and the exeresis must be extensive, involving total hysterectomy and bilateral adnexectomy in elderly or peri-menopausal patients. However, conservative surgery may be considered in younger patients. Uterine biopsy and curettage should be associated. Platinum-based chemotherapy is recommended for advanced forms.

The prognosis of granulosa tumors is uncertain, and strongly dependent on tumor stage, tumor size, capsular rupture and mitotic index.

In our case, the patient underwent total hysterectomy with bilateral adnexectomy, without additional chemotherapy.[10]

CONCLUSION

Granulosa tumors are rare tumors of the ovary whose diagnosis is anatomopathological. Several cellular and molecular alterations may be involved in the development of these tumors. Treatment is based essentially on surgical excision, with a generally favorable prognosis. Long-term surveillance is necessary, however, due to their potential for late recurrence.

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