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Granulosa Cell Tumor of Ovary: A retrospective study of 16 Cases.

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Granulosa cell tumors (GCTs) are the most common type of potentially malignant ovarian sex cord-stromal tumor being usually diagnosed in the early stages. They are considered low grade malignant neoplasm. since most patients present with stages I, with survival rates up to 84-95%. GCTs represents approximately 2-5% of all ovarian cancers. Two varieties are distinguished: juvenile and adult granulosa cell tumors. The adult type is the most frequent (95%), with an average age of 50-55 years. The main serum marker is inhibin B. High levels in the follow-up are associated with increased risk of recurrence and predicts relapses.

Patients with GCTs may present with abdominal pain, bloating, mass or menstrual disorders. Stage is the most important prognostic factor, with 10-year survivals of 84-95% for stage I tumors, decreasing to 50-65% for stage II disease, and to 17-33% for stages III and IV. The surgical treatment of these tumors depends on the tumor stage and the patient's age and reproductive desires. Recurrences usually occur between 5-10 years after diagnosis; However, they can be very long-term (up to 37 years), so long-term follow-up should be performed

The data available is mainly based on retrospective series that include a small number of patients treated over a long period of time. The objective of our study is to evaluate the clinical presentation, the pathological characteristics, the treatment and the result of the patients with GCTs in our Hospital.

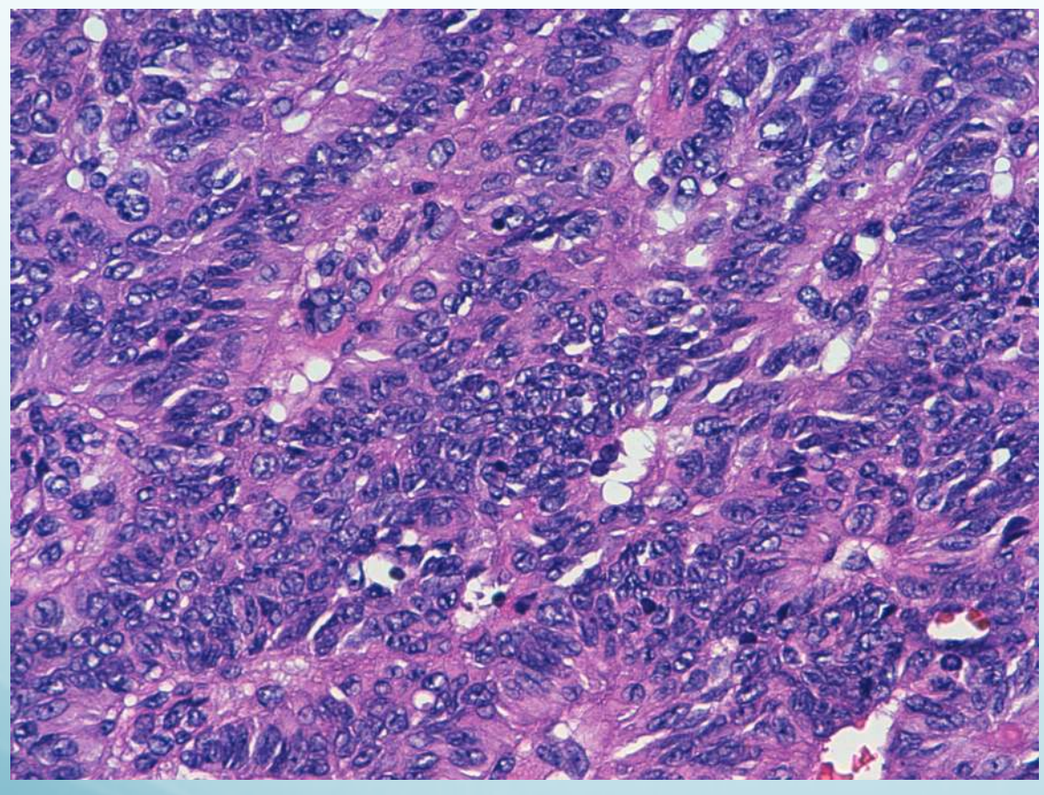

Figure1. Histopathological appearance of granulosa cell tumor.

Methodology: all CGTs cases diagnosed and treated at the Ramon y Cajal University Hospital in Madrid, Spain from 2000-2019 were retrospectively analyzed

Results: A total of 16 patient were included. Mean age was 52.4 years (range 14-67) Patients presented mainly with abnormal bleeding (37,5%). 25% of the patients started with abdominal pain and/or abdominal mass, finding 2 cases of acute abdomen requiring urgent surgery. Only one of the cases was of the juvenile subtype. The 93,75% of the cases were diagnosed in FIGO stage I disease (86,6% stage IA, 13.4% stage IC), and one case of IVC stage with pulmonary involvement. Primary treatment was surgery in all cases, 12 patient underwent total hysterectomy with bilateral salpingoophorectomy. Complete staging surgery was performed in 33,3% of these patients. In 25% of cases, unilateral adnexectomy was performed. Median tumor size was 5.3 cm. 92.3% of the cases were of adult subtype. Mitotic index was measured in 11 patients, being low in 54,5% of cases. Cellular atypia was objected in 5 cases. Only one patient received adjuvant therapy with tamoxifen due to treatment of a previous breast cancer. Adjuvant chemotherapy was offered to the patient with IVC stage disease, denying treatment.

The median follow-up time was 8.4 years. Inhibin determinations in blood were carried out in 5 patients since 2017. Abdominopelvic relapses were reported in 2 patient with FIGO stage I (12.5%). Surgery with optimal resection and platinum based adjuvant chemotherapy were given. The mean relapse free survival was 4.2 years (3-84 months).

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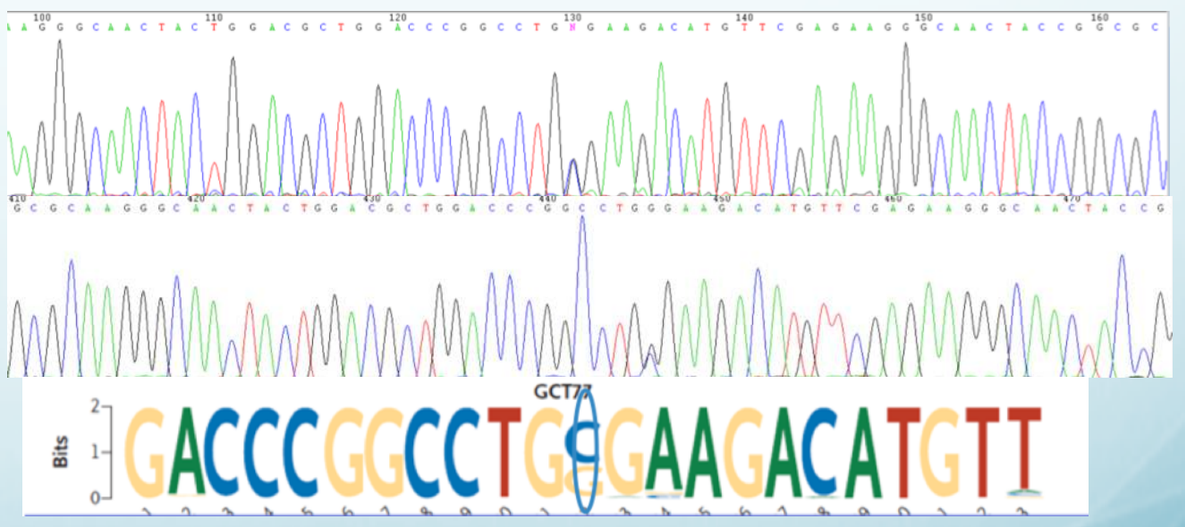

Figure2. Mutation in FOXL2 codon 134 in GCT, 402C→G mutation . The analysis of this mutation is useful in patients with uncertain diagnosis since 97% of all A-GCTs and 10% of J-GCTs present it.

Conclusion: GCT tumors are uncommon neoplasm with low malignant potential and late recurrences rate. Therefore, long active follow up is recommended

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