Case Report : Gynecology

Unusual Presentation of Adult Granulosa Cell Tumor of Ovary in Young Female: A Case Report

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ABSTRACT

The Granulosa cell tumor of ovary is an uncommon condition belonging to the group of sex cord stromal tumors, the incidence being 5% of all ovarian tumors. They are broadly divided into Adult types and Juvenile types according to age of the patients being affected. It is also found that Juvenile granulosa cell tumor occurs in younger ages than the adult counterpart. Although the incidence of adult granulosa cell tumors is high, the occurrence of Adult type of Granulosa cell tumor in younger age groups are rare in occurrence. We report a rare case of 24 years old woman who presented with the symptom of AUB with heaviness in lower abdomen, incidentally diagnosed with an ovarian tumor, with review of the literature. After adequate preparation she underwent a right adnexectomy. The histopathology reported an adult granulosa cell tumor.

Keywords: Ovary, Younger Age, Sex Cord Stromal Tumor, Adult Granulosa Cell Tumor.

Introduction

With overall incidence of 1%-2% in occurrence, Granulosa cell tumors are rare ovarian neoplasm and represent 2%-5% of malignant ovarian tumors.[1] Classified in broad classification as sex cord-stromal tumors they are divided into 2 groups: adult and juvenile types. The adult form represents the most frequent type with 95% occurrence and have good prognosis amongst the other ovarian tumors.[2] The diagnosis is made on gross tumor appearances and histological examination.[1] Although the Adult Granulosa cell tumors are more common in pre and perimenopausal women and rare in younger ages,[3] we report a case of an adult granulosa cell tumor in a young woman, which is a rare presentation.

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Observation

Miss X 24 years old unmarried complaining of AUB evident for last 6 months visited the OPD. She was not aware of presence of a mass or swelling in the abdomen. She was fairly built with height of 1.52 meters and body weight of 61 kg, Thus BMI calculated being 26.4kg/m2. On examination vitals was stable, and on per abdominal examination she had an 18-20 week size of a palpable mass. On Magnetic Resonance and Imaging (MRI) showed a 13cm x 11 cm x 9.5 cm solid cystic mass with multiple tortuous draining venous channels on lateral surface. Hemoglobin, Haematocrit, fasting blood glucose, lipid profile, serum electrolytes, and renal and liver function tests were normal. Tumor marker correlations were done, with raised INHIBIN B of 2277.87 (range 21-53) also INHIBIN A values were 397.6. However other markers like CA-125, CEA, Alpha feto protein and beta HCG were within normal limits.

She was taken up for staging Laparotomy and with right Adnexectomy-fertility sparing protocol. Operative findings: uterus normal size, the right ovary was enlarged 25 cm X 20 cm in size, elongated in shape, multi loculated, with smooth surface and stretched right tube. Left tube and ovaries were normal. There was minimal ascitic fluid. No peritoneal deposits or evidence of omental caking were present. Frozen section of Right ovarian mass showed granulosa cell tumor of Ovary. On histopathological examination of the tissues confirmed the diagnosis to be Granulosa cell tumor, Adult type. Pathological staging of tumor was pT1a (pTNM, AJCC, 8Th edition). And on immunohistochemistry Inhibin and Calretinin were diffusely positive, Synaptophysin, CK 7, SALL 4 and EMA negative. Ki-67 showed 4% positivity. Postoperative period was uneventful and she got discharged in fair condition.

The post operative follow up is satisfactory. The INHIBIN B level after 3 months are 216.

Discussion

The Unusual case of Adult granulosa cell tumor in young age (24 years) is typical to the presented case.

The Granulosa cell tumor of ovary is a sex cord stromal tumor which accounts of about 5% of all malignancies in the ovary. Although classified into a) Adult type and b) Juvenile types, According to the names the frequency of occurrence of Adult granulosa cell tumor are high in Adults premenopausal and perimenopausal women.[4] Although not rare, it is uncommon for the occurrence of the adult type of granulosa cell tumor in the younger age groups. A study done in 2011 shows, only about 5%-7% of cases occurring at the age below 30 years, with incidence uncommon in lesser age on that range.[5] Our case presented at the age of 24 years is a rare event to occur.

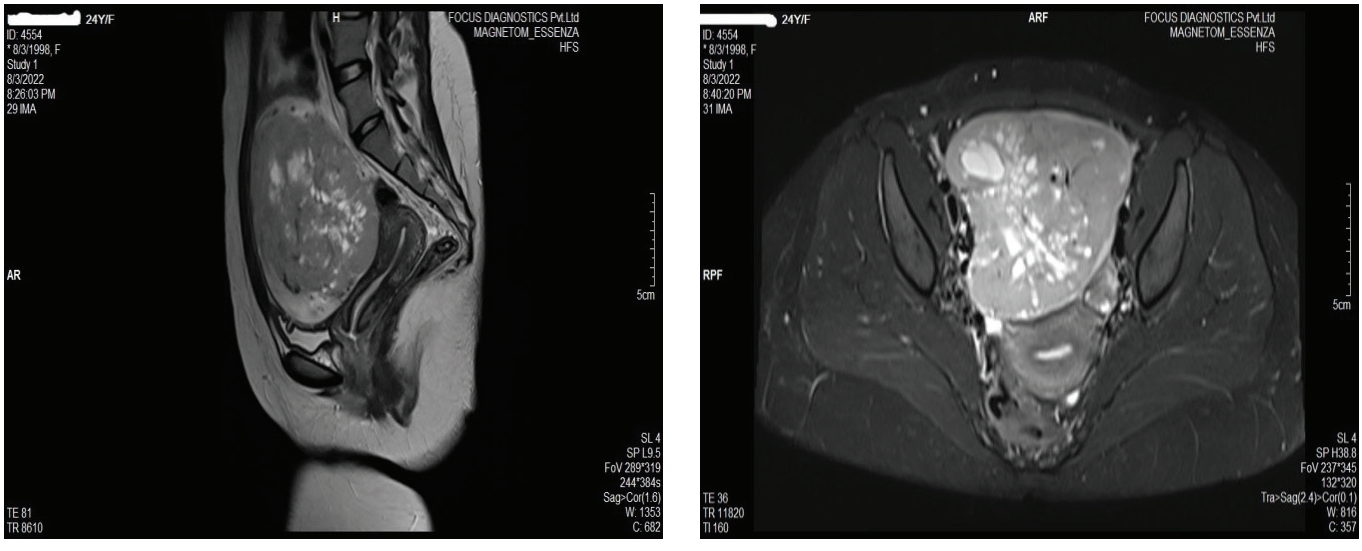

Fig 1: T2 weighted contrast enhanced MRI of the transverse and longitudinal section of the tumor at its maximum dimension. Reported as: Solid cystic lesion in right adenexa measuring 13 x 11 x 9.5 cm. With multiple tortuous draining venous channels noted along the lateral surface of the lesion.

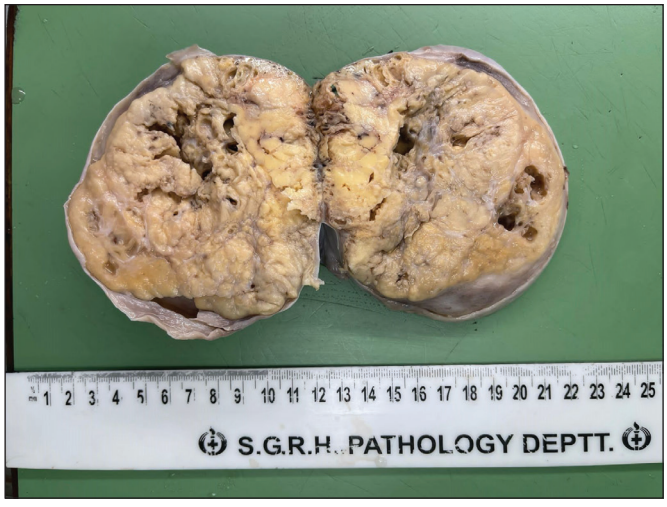

Fig 1: Gross appearance of the tumor; size of about 9.5 cms in longest diameter, areas of solid and cystic areas.

The Granulosa cell tumor on gross appearance looks solid to cystic in appearances of varied sizes, generally when diagnosed. The tumor can be of smaller size under the range of 10 cm and below. There are five histological patterns like micro, macrofollicle, insular, trabecular and spindle/sarcomatoid. Among these microfollicular pattern with Call-Exner bodies and coffee bean nuclei are the commonest diagnostic points.[2,6]

Most of the cases experienced a unilateral enlargement of the ovary. And Surgery with oophorectomy of the involved site is the apt treatment in early stages of the tumor. The Stage I disease are more exclusively cured by unilateral salpingoophorectomy and fertility conservation with preservation of the uterus and contralateral ovary and fallopian tubes, as done in this case.

The late recurrences after 20-30 years of initial treatment are seen. Thus post treatment follow up are advised, every 2-3 months for initial 2 years. Subsequently in 4-5 months for another 3 years and beyond. Then after she should be called for follow up every year. At the time of follow up it is advisable to take history, perform physical and pelvic examination (if indicated) correlated with tumor marker study), and imaging preferably contrast enhanced Computed Tomography (CECT) specially those coming for yearly follow up.[7]

Conclusion

The unusual occurrence of Adult granulosa cell tumor in a tender age is quite unique. As other ovarian tumors, this can also be diagnosed incidentally. However prompt decision and immediate surgery may provide good prognosis.

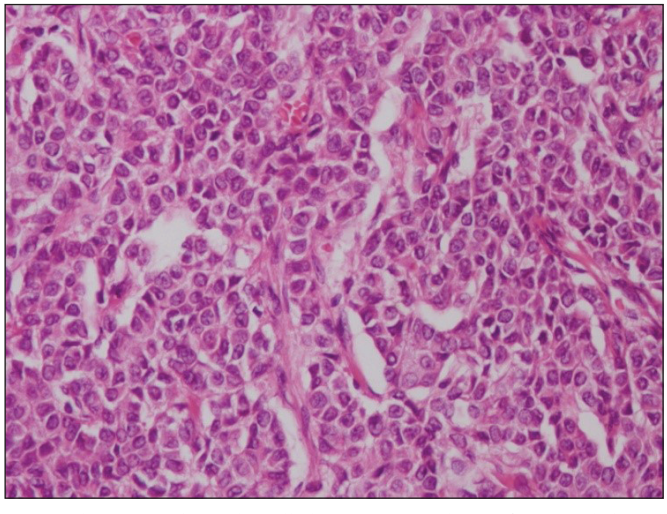

Fig 2: shows moderately cellular tumor with gyriform, solid nests, diffuse sheets, trabeculae, ribbons and insular pattern. Few micro-follicular patterns with cell-exenor bodies and focal micro follicular patterns.

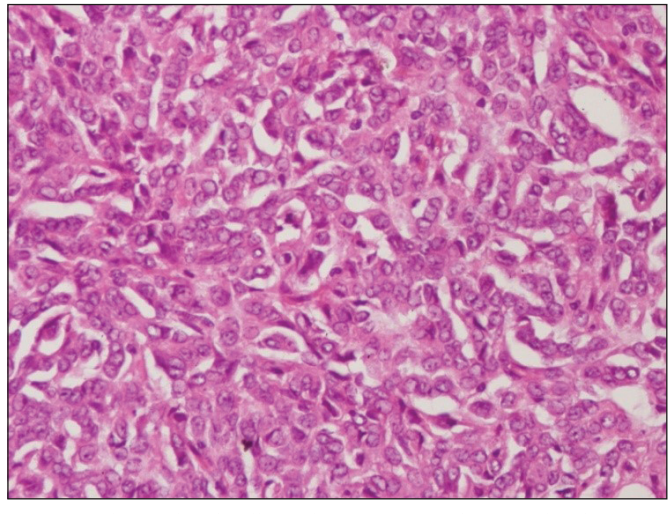

Fig 3: oval to cuboid cells with scanty cytoplasm and pale angular nuclei with focal grooving, with few mitosis and scanty intervening fibrous stroma are also seen

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