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Original Research Paper

Gynaecology

GRANULOSA CELL TUMOR OF OVARY:CLINICOPATHOLOGICAL STUDY OF CASES

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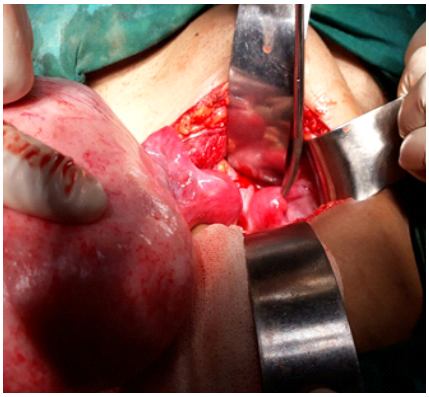
KEYWORDS :

INTRODUCTION:

Adult granulosa cell tumor (GCT) is a rare ovarian malignancy accounting for 1-2% of all tumors and 95% of germ cell tumors originating from sex cord-stromal cells.[1,2,3] These have good prognosis in comparison with other epithelial tumors. Juvenile GCT, another clinic-histologic subtype of GCT accounts for 5%, occurring at an early age and have increased risk of recurrence.[3,4,5] Adult GCT has precise clinical, histological and evolutional profile. They frequently occur in postmenopausal women with peak incidence between 50 to 55 years.[1,2] Endometrial reaction to these ovarian tumors is simple hyperplasia while few cases of associated endometrial carcinoma have been reported.[1,2] The present study was undertaken to evaluate epidemiological, various pathological characteristics of GCT and to study associated endometrial changes. Primary treatment is surgical with total abdominal hysterectomy and bilateral salpingo oophorectomy alone in early stages, but adjunctive chemotherapy is needed for advanced stages. The role of retroperitoneal lymph node dissection is controversial [6]. BEP regimen appears to be an active combination for malignant tumours of the ovarian stroma [7]. Granulosa cell tumours have a tendency for late relapse, and hence long-term follow up is necessary [8].

CASE 1

32YRS OLD FEMALE MS 7YRS NULLIGRAVIDA CAME WITH C/O, oligomenorrhora since 5-6yr On examination General examination is within normal limits. Per abdomen Soft and no grading and tenderness. On per speculum examination cervix and vagina healthy and on per vaginal examineion uterus is with left sided fullness in fornix. USG S/O-Large abdominal mass of size 25X19X12 cm solid ovarian mass with endometrial thickness of 9.7 mm. MRI PELVIS- Enhancing Left ovarian neoplasm measuring 13X7.8X12.8 CM. Tumour markers are as follows CEA-0.677, AFP-2.47, CA125-8.22, B HCG-NEGATIVE, INHIBIN-18pg/ml. Patient was managed by exploreatory laparotomy with left ovaryan mass excision. INTRAOPERATIVELY :LARGE LEFT OVARIAN MASS 12X8X5CM VISIBLE,SOLID,HARD,FIRM MASS+,BICORNUATE UTERUS and on histopathology adult granulose cell tumour is diagnosed



CASE 2

45 YRS OLD FEMALE MS 23YRS P2L2,TL DONE 18YRS BACK PERI MENOPAUSAL SINCE 2YRS IN K/C/O HYPOTHYROIDM SINCE 20YRS CAME WITH C/O,MENORRHAGIA SINCE 2017 On examination general examination is within normal limits. Per abdomen is soft with no guarding and tenderness.Per speculum examination shows cervix and vagina healthy. Per vaginal examination shows uterus is bulky with right sided fullness of fornix.On CECT uterus is normal in size with mildly enhanced mixed density in pelvis is noted of approximately 8.4X4.7X9.7 Cm in broad ligament without evidence of calcification suggestive of posterior subserosal fibroid with endometrial thickness of 13 mm. TUMOR MARKER are as follows ESTRADIOL-151,TSH-0.628, CEA-4, B HCG-1.2, AFP-2, CA 125-8.1.Patient was managed by exploratory taprootomy with right ovarian mass with total abdominal hysterectomy with bilateral salphingoophorectomy with bilateral peltic and parador tic lymph node dissection. INTRAOPERATIVELY Multiple adhesion are present for which adenolysis is done and shows a right ovarian cystic mass measuring 6X5X6 Cm and sent for Histopathology on which final diagnosis of Granulosa cell tumour of right ovary comes.

DISCUSSION

These are rare malignant tumors with two distinct clinicopathologic subtypes like adult and juvenile. Adult variant is commonest accounting to 95% occurring in peri (40-45 years) and post-menopausal women (>45 years) with peak incidence at 50-55 years.[1,2] Juvenile GCTs are rare neoplasm comprising 5% of all GCTs occurring in the prepubertal age group.[9,10] The clinical manifestations ranges from pain abdomen, abdominal distension, menstrual abnormalities like menorrhagia, intermenstrual, postmenopausal bleeding or amenorrhea.[2,3,11]. Endocrine manifestations are related to estrogen hypersecretion resulting in endometrial hyperplasia, leiomyomas and irregular menstrual abnormalities.[1,2,3,12] Literature search reveals excessive estrogenic stimulation that leads on to endometrial hyperplasia in 25-50% and subsequent development of endometrial carcinoma in 5-13% of cases [2,3]. The traditional treatment modalities followed are complete surgical excision of tumor with unilateral salphingo-opharectomy in patients desirous of preserving fertility. Total abdominal salphingo-opharectomy with bilateral salphingo-opharectomy in patients with completed family. Occasionally followed up with chemo or radiotherapy.[2,3,13]. Ultimate final diagnosis is by histopathological analysis. The adult form includes five histologic 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.[2,3,14]. The immuno-histochemistry (IHC) markers valuable in this entity are vimentin, CD99 and inhibin.[3] The serum tumor markers raised in GCT are estradiol, inhibin, antimullarian hormone and CA-125.[2,3,15] In the present study only one of our case showed raised inhibin levels done postoperatively. Commonly encountered differential diagnosis for GCT includes endometrioid carcinoma, stromal sarcoma, carcinoid tumors, adenocarcinoma and undifferentiated carcinoma. However

histopathology of Call_Exner bodies, nuclear grooves and IHC markers help in ruling out the differentials.[2,3,16] In the present study, one of our case had differential of endometriod stromal sarcoma and IHC enabled a prompt diagnosis. Studies have shown that tumor size less than 10cms have better prognosis.[3,6,9] However, Sehouli et al.,[13] stated that smaller tumor may be aggressive due to their biological behavior; hence, tumor size is not a valid prognostic factor. Patients less than 40 years of age are supposedly associated with better prognosis, however, various authors differ in their opinion with regards to significance of patients age and survival.[3,6,13] Histologic grade and mitotic figures show an inverse relation with survival rate.[3,6,8,13,17]. Since our follow-up was not upto this period, we are unable to comment on survival rates but still younger age group, early stage and well differentiated tumors helped us predict better prognosis. Recent studies have documented other prognostic factors like pliody, S-phase fraction and p53. However, its relevance as prognostic factors is yet to be investigated further.[13,18]

CONCLUSION

Granulosa cell tumor of the ovary is a rare ovarian entity. Paramount prognostic factor is staging of the tumor. Other prognostic factors are tumor histology, mitotic activity and nuclear grade. Hence staging and histopathology helps in prediction of survival. Also diligent endometrial pathology has to be sorted to rule out endometrial carcinoma which helps in its early detection, better management for patient wellbeing.

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