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Atypical Presentation of Granulosa Cell Tumor.

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ABSTRACT

Adult Granulosa cell tumor (GCT) is one of the rare ovarian malignancies constituting 1-2% of all tumors and 95% of germ cell tumors originating from the sex cord-stromal cells. They have good prognosis when compared with other epithelial tumor`s. Juvenile GCT, another subtype of GCT constitutes of about 5%, occurs at an early age and has increased risks of recurrence. Adult GCT has a precise clinical, histological and evolutional profile. They occur most commonly in postmenopausal women between 50 to 55 years. Endometrial response to these ovarian tumors is mostly simple hyperplasia while few cases have been associated with endometrial carcinoma.

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Case Report

A 51-year female presented to the casualty P2L2A1 ,FTNVD, sterilized , LMP-5-3-16 ,previous LMP -16-1-16, c/o bleeding p/v 21 days soaking 6-7 cloths per day associated with passing clots ,H/O breathlessness – grade IV ,H/O abdominal pain for 4 days ,No H/O burning micturition ,No H/O white discharge, Previous Regular cycles – 5/25 days 2-3 cloths/day not associated with pain /passing clots , Past 1 ½ years – 5/25-30 days 5-6 cloths /day associated with passing clots , no co morbidities , h/o 2 units of blood transfusion over past 10 days **O/**E Conscious, oriented ,Afebrile, hydration fair ,Dyspenic at rest,Pallor + / B/L pitting pedal edema +,Cvs- s1s2+,Rs – b/l minimal basal crepts ,P/A – abdomen distended ,Umblicus – central ,Mass palpable arising from the pelvis about 20-22 wks size,Non tender ,Restricted mobility ,Ill defined,No guarding / no rigidity,No rebound tenderness,Bowel sounds – sluggish ,L/E – fungal infection over the external genitalia and inner aspect of the thigh ,p/s – cervix vagina –healthy,spotting from the os +,p/v cervix mid position os admits tip of finger,uterus 20-22 wks size, firm in consistency , restricted mobility , same mass felt in all the fornices .USG – Done outside showed Uterus appears bulky with large heterogenous echoic fibroid and multiple small fibroids Both ovaries could not imaged due to bulky uterus ,Moderate ascites documented approximately 180cc.CT-abdomen – done outside .Large non enhancing hyper dense lesion in the lower abdomen abutting the fundus of the uterus – suggestive of haematoma(degenerated sub serous fibroid from fundus can be considered) ,Ovaries appear atrophic ,Inferior aspect of the haematoma abuts the fundus of uterus ,Minimal free fluid in the abdomen ? Haemoperitoneum ,Patient was admitted in ICU -medicine department with breathlessness , B/L pleural effusion ,severe anaemia,in view of severe anaemia -Initially 2 units of packed cells , 3 units platelets , 4 units of FFP transfused ,Meanwhile OBG opinion called for in view bleeding PVx21days bleeding P/V controlled with antifibrinolytics ,Pulmonologist – pre and post op nebulization ,Ascitic tap done for minimal ascites – four quadrant tap done – dry tap ,Ca125- 63.7,Pap smear – inflammatory smear ,Pipelles endometrial sampling done – proliferative endometrium Once the patient fit for surgery and the bleeding p/v controlled – patient taken up for surgery .Total abdominal hysterectomy with bilateral salphingo oopherectomy proceeded done .Intra OP findings: Huge ovarian cyst 20x16 cm arising from the right ovary showing haemorrhagic changes , cyst removed and blood clots evacuated – around 500 gms ,Left tube and ovary – normal ,Uterus – normal, Organised clots seen over the large bowel and also in both right and left pelvic wall .

On histopathological examination (HPE), mass revealed tumor cells being arranged in cords, solid sheets, trabecular pattern and at places microfollicular pattern with Call-Exner bodies. Individual tumor cells are round to oval with nuclear grooves and mitotic figures of 2/10 high power field. Final diagnosis of GCT — Stage 1A

DISCUSSION

Rokintansky first described Granulosa cell tumor of ovary in 1855.(6,7). These are rare malignant tumors with two distinct subtypes - adult and juvenile. Adult variant is commonest accounting for about 95% occurring in peri- menopausal (40-45 years) and; post-menopausal women (>45 years) with peak incidence at around 50-55 years. [1,2] Juvenile GCTs are rare neoplasm comprising of about 5% of all GCTs occurring in the prepubertal period [8,9]. The clinical manifestations are pain abdomen, abdominal distension, menstrual abnormalities like menorrhagia, intermenstrual, postmenopausal bleeding or amenorrhea [2, 3, 10]. Endocrine manifestations due to estrogen hypersecretion leading to endometrial hyperplasia, leiomyomas and irregular menstrual abnormalities [1-3,11] 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]. In the present study this patient's endometrial histology revealed simple hyperplasia without atypia . Radiologically both juvenile and adult GCTs will present as large mass measuring upto 12cms in diameter multicystic appearance [2,3,12,13].

The treatment modalities are complete surgical excision of the tumor along with unilateral salphingo-oopharectomy in patients desirous of preserving fertility. Total abdominal salphingo-oopharectomy with the bilateral salphingo-opharectomy in patients who have completed family. Patients are followed up with chemo or radiotherapy [2,3,14]. Ultimate final diagnosis is made 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 [2,3,15]. Silver stain shows reticulin fibres around clusters of cells suggestive of GCT. Thecal component was

seen along with GCT but, however, documented literature necessitates presence of more than 25% of thecal cells to be present to call it a thecoma, which is a benign entity with very good prognosis.(11) The markers valuable in this are vimentin, CD99 and inhibin.(3) The serum tumor markers raised in GCT are estradiol, inhibin, antimullarian hormone and CA-125 [2,3,16]. 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 [2,3,17].

Ascitic fluid cytology positive for malignant cells were found in few cases in some of the studies, however survival rate or prognosis for them could not be established [14]. Various prognostic factors in GCT have been reported of which the staging is a traditional paramount variable. Others include intraperitoneal disease, tumor size, patients age, histologic grade of differentiation, mitotic activity and nuclear atypia [6,14,17,18]. Survival rates after 10 years for stage 1,2,3 and 4 are 87.2%, 75%, 20%, 0% respectively [3,9,14].

Studies have shown better prognosis is associated with tumor size less than 10cms [3,6,10]. But, smaller tumors may be aggressive due to their biological behaviour as shown by Sehouli *et al*.,; Therefore, tumor size is not a valid prognostic factor. Patients less than 40 years of age are probably associated with better prognosis, but, various authors differ in their views on significance of patients age and survival [3,6,14].; Histologic grade and mitotic figures have an inverse relationship with survival rate [3,6,8,14,18]. Since ours is a single case report , we are unable to comment on survival rates. Recent studies have revealed other prognostic factors like pliody, S-phase fraction and p53. But, its relevance as prognostic factors is yet to be proved [14,20].

CONCLUSION

Granulosa cell tumor of the ovary is a rare entity in regular practice. Most important prognostic factor is staging of the tumor and other prognostic factors like tumor histology, mitotic activity and nuclear grade also help in predicting prognosis of patients. Also watchful screening for endometrial pathologies should be done, which helps in early detection of endometrial cancer, and better management for patient wellbeing.

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