

Ovarian steroid cell tumor, not otherwise specified

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Key words

Virilizing ovarian tumour • Steroid cell proliferation • Benign

Summary

Ovarian steroid cell tumours are rare virilizing tumours. They are three types of tumours of ovary which are characterized by steroid cell proliferation : Leydig cell tumour, steroid cell tumour, Not Otherwise Specified (NOS) and stromal luteoma. Here we present a case of 36 year old female, who presented with history of weight loss since last two and half months. There is history of amenorrhoea and hirsutism. Her CA was 125: 11.4 IU/ml (0-35 U/mL). Blood Testosterone levels was elevated with value of 150 ng/ml (5.71-77

ng/ml). Serum Inhibin A, Inhibin B, FSH, LH and prolactin were within normal limits. The steroid cell tumour, NOS are mostly benign but few of them behave in malignant fashion. Hayes and Scully gave few histopathological features which favour malignant behavior. These tumours should be differentiated from leydig cell tumour by lack of cytoplasmic Reinkes' crystals as well as from other neoplasms like primary clear cell carcinoma, metastatic clear cell renal cell carcinoma and adrenocortical tumour.

Dear Editor-in-Chief,

Ovarian steroid cell tumours are rare virilizing tumours accounting for less than 0.1% of all tumours of the ovary. They are three types of tumours of ovary which are characterized by steroid cell proliferation : Leydig cell tumour, steroid cell tumour, Not Otherwise Specified (NOS) and stromal luteoma^{1,2}. Out of these tumours, steroid cell tumour (NOS) is the most common accounting for approximately 60% of these tumours³. Steroid cell tumour, NOS are mostly unilateral and majority of them present with virilization. The age of presentation ranges from two and half years to eighty years¹.

Here we present a case of 36 year old female, who presented with history of weight loss since last two and half months. There is history of amenorrhoea and hirsutism. Her CA was 125: 11.4 IU/ml (0-35 U/mL). Blood Testosterone levels was elevated with value of 150 ng/ml (5.71-77 ng/ml). Serum Inhibin A, Inhibin B, FSH, LH and prolactin were within normal limits. MRI (Magnetic Resonance Imaging) whole abdomen with contrast was done and showed a large, oval, solid heterogenous enhancing mass lesion in right adnexa (Fig. 1A). This Mass showed heterogenous enhancement on post contrast study suggestive of right mitotic ovarian lesion (Fig. 1B). After the radiological examination, right salphingo-oophorectomy with infracolic omentectomy was done. The specimen of right ovary showed a well-

circumscribed yellow colored tumour measuring mm. The histopathological examination showed a well circumscribed neoplasm composed of sheets of polygonal cells (Fig. 1C). The cells had clear to pale eosinophilic cytoplasm (Fig. 1D). The nuclei were small and round with mild atypia. Mitosis was infrequent. No Reinkes' crystals identified. There was no necrosis and haemorrhage (Fig. 1E, F). The patient is under follow-up since past one year. The testosterone level dropped significantl post-surgery and now is within normal limits.

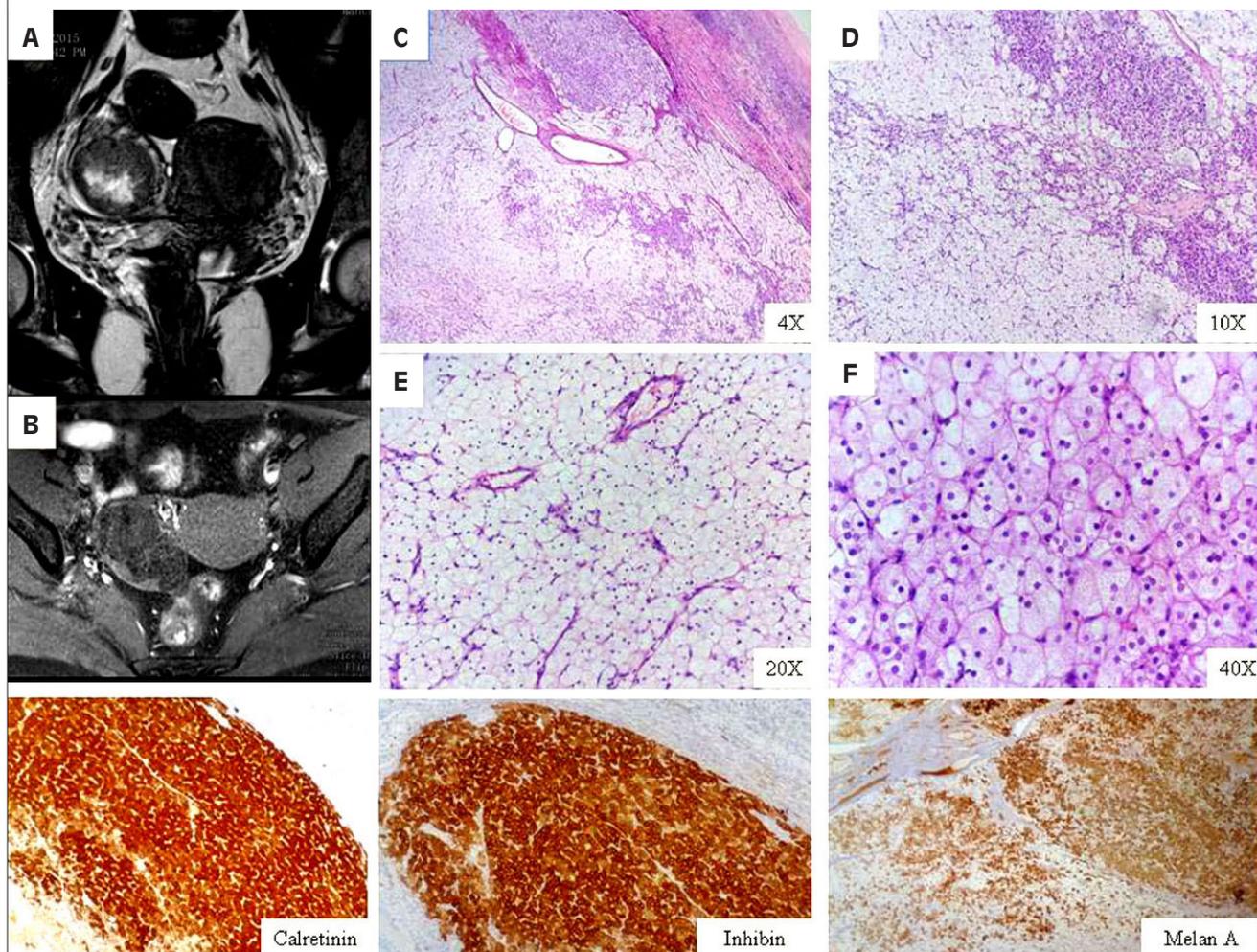
The steroid cell tumour, NOS are mostly benign but few of them behave in malignant fashion. Hayes and Scully gave few histopathological features which favour malignant behavior. These are two or more mitotic figures per high power fields, grade 2-3 nuclear atypia, necrosis, haemorrhage and size of the tumor more than seven centimeters².

The management of these tumours is surgery and follow-up monitoring of testosterone levels specially in those patients who demonstrate elevated levels before the surgical removal of ovarian tumour⁴. These tumours should be differentiated from leydig cell tumour by lack of cytoplasmic Reinkes' crystals as well as from other neoplasms like primary clear cell carcinoma, metastatic clear cell renal cell carcinoma and adrenocortical tumour.

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Fig. 1. (A) MRI (Magnetic Resonance Imaging) whole abdomen with contrast shows a large, oval, solid heterogenous enhancing mass lesion in right adnexa. (B) shows heterogenous enhancement of masson post contrast study suggestive of right mitotic ovarian lesion. (C) H & E, 4X, shows a well circumscribed neoplasm composed of sheets of polygonal cells. (D) H & E, 10X, the cells have clear to pale eosinophilic cytoplasm. (E, F) H & E, the nuclei are small and round with mild atypia.



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