

Virilizing Adrenal Tumor: Case Report

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I. Introduction

Virilizing adrenal tumors are uncommon in adult women. In worldwide incidence is 0.02% cases per million population. These lesions generally secrete dehydroepiandrosterone (DHEA) and dehydroepiandrosterone sulfate (DHEAS).

Virilization is most common symptom of adrenal cortical tumors. We present a case report of young female who presented with virilizing adrenal tumor.

II. Case Presentation

19 years old female was referred to surgical clinic as she presented with amenorrhea and vitalizing symptoms for past 7 months. During our clinic review revealed patient had hirsutism, deepening of voice and examination showed a micropenis.

Ultrasound pf pelvis showed uterus with barely visible ovaries. She was previously well till she noticed symptoms 7 months ago. CT Abdomen and pelvis was done and reported a large left suprarenal tumor measuring 10x8.3cm, likely a primary adrenocortical carcinoma.

Blood investigation revealed elevated serum testosterone of 13nmol/L (0.4-2.7) and DHEA sulphate of 2433ug/dl (174-248). Diagnosis of adrenocortical tumor was made and planned for adrenalectomy.

She underwent laparotomy and left adrenalectomy on 30 January 2018. Intraoperatively noted adrenal tumor measuring 10cm x 10cm, well encapsulated with no infiltration into surrounding organs. Post operatively she recovered well.

Histopatology report showed oncocytic adrenal cortical neoplasm of uncertain malignant potential (Lin- Weiss-Bisceglia system) Immunohistochemical studies shows the neoplastic cells are diffusely positive for melan-A and inhibin and patchy positivity for vimentin. They are negative for chromogranin A, S100 and CKAE1/AE3.

During our follow up review we monitor her hormonal level and regression of virilizing symptoms.



Figure 1: Gross appearance of Left adrenal specimen. Weight 393gm

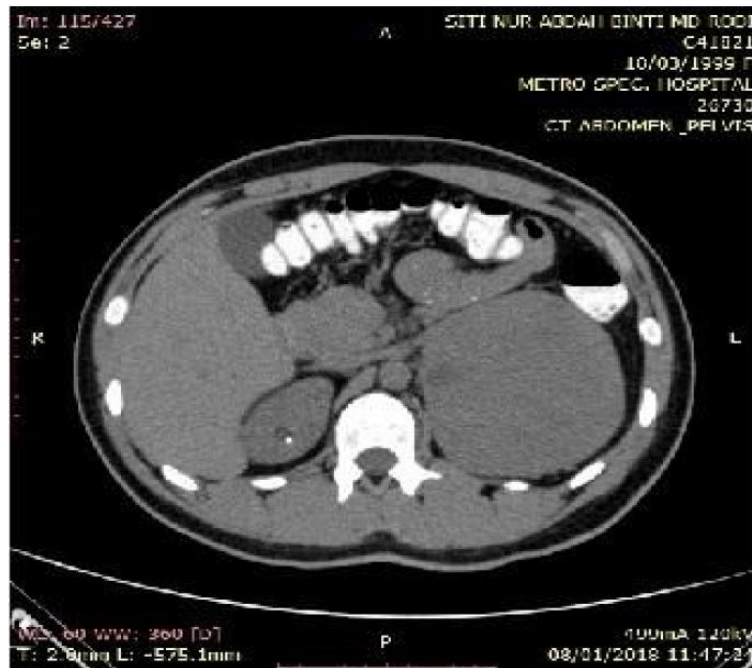


Figure 2: CT image reveals presence of large heterogenous isodense tumor with scattered areas of attenuation seen at the left suprarenal region likely arising from adrenal gland. Lesion measures 10x8.3cm

Parameters on CT scan	Benign	Malignant
Size	Masses ranging in size between 3 and 5 cm are in the 'grey zone'. They require additional imaging such as unenhanced/chemical-shift MRI to determine whether or not the lesion is a lipid-rich adenoma, in addition to biochemical evaluation to exclude a functioning lesion/mass.	All masses larger than 5 cm in size will be surgically removed irrespective of their imaging appearances (except for classical adrenal cysts and adrenal myelolipomas), as the incidence of adrenal carcinoma tends to be higher in masses of this size
Hounsfield units	0 HU (Hounsfield units) or less on unenhanced CT, the likelihood of it being a benign mass is almost 100%.	Density measurements of greater than 10 HU can be seen in metastases, they can also be seen in lesions which are not lipid rich

III. Discussion

Virilization is most common symptom of adrenal cortical tumors. It is difficult to distinguish benign adrenocortical tumors from malignant solely basis of histopathological features, unless patients have obvious signs of malignancy such as metastatic disease or local invasion.

The clinical histopathological studies of Hough and Weiss attempted to distinguish benign lesion from malignant in adults, however many adrenocortical tumor display both benign and malignant morphological characteristics. It carried good prognosis, and complete removal is the most effective treatment besides early detection.

Reference

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