

Virilizing Adrenal Carcinoma: A Case Report

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Abstract

Virilizing adrenal carcinoma is a rare disease. The adrenal carcinoma may secrete increased amount of glucocorticoids, mineralocorticoid and sex steroids. The over production of sex steroids leads to virilizing symptoms. Surgery with en-block resection is recommended. The role of adjuvant therapy is controversial.

INTRODUCTION

Virilizing adrenal carcinoma is a very rare disease (_{1,2}). We are reporting a case of adrenal cortical carcinoma with virilizing symptoms due to its rare presentation.

CASE REPORT

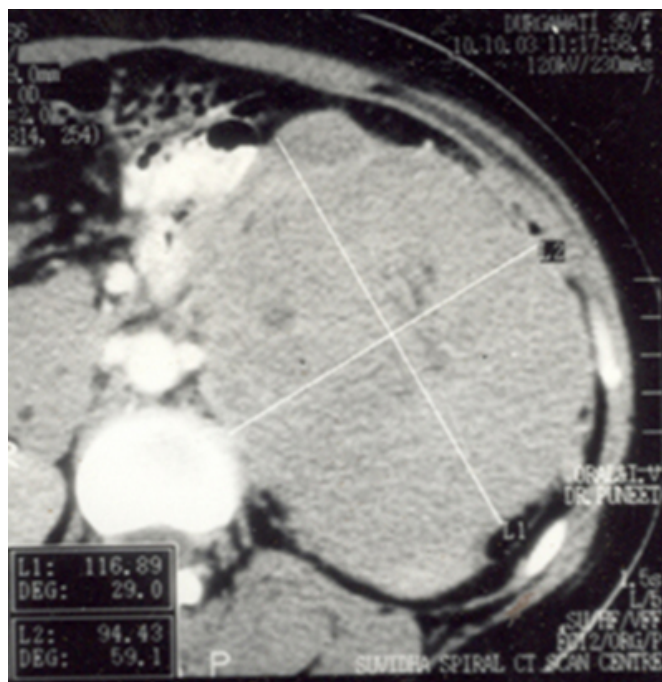
40 yrs female presented with complains of pain and lump in left upper abdomen for 6 months. She also complains of increased facial hair growth for last six months. On examination her pulse was 84/min and blood pressure was 140/88mmHg. Facial hair growth was present but there was no temporal balding. Pelvic examination revealed no obvious enlargement of clitoris or any adnexal abnormality. Abdominal examination revealed increased hair growth in the midline area. Lump of size 12x12cm present in left hypochondrium extending to the left lumbar region.

On investigation hemoglobin was 14gm%, TLC 15000/mm³ with polymorphs 80% and lymphocyte 20%. Fasting blood sugar was 80mg%, serum creatinine was 0.7mg% and serum electrolyte with sodium 141meq/l and potassium 3.45meq/l, liver function test was normal. Urinary vanillyl mandelic acid was 3.2mg/24hrs (normal up to 7mg/24hrs). Serum testosterone was 248ng/dl, and DHEA sulfate was 420 g/dl. Serum cortisol was 14mg/dl. USG abdomen showed a complex echogenic mass lesion in left paravertebral region, right kidney was normal. IVP showed left suprarenal mass pushing left kidney downwards. Contrast CT of abdomen revealed heterogenous solid mass of 11.7x 9.5cm in suprarenal region separate from upper pole of left kidney and splenic parenchyma with left kidney pushed inferiorly. Mass had indistinct plane of cleavage with pancreatic tail. Contralateral adrenal gland is normal in size and attenuation.

No evidence of lymphadenopathy. Surgery was performed with enblock resection of left suprarenal mass. Postoperative recovery was uneventful. Patient was followed up.

Figure 1

Figure 1: CT-scan showing heterogenous solid mass in left suprarenal region



DISCUSSION

Adrenal cortical carcinoma is a rare disease with an estimated incidence of 1 per 1.7 million (₁). It has bimodal age distribution, with peak in first and fifth decade. It is more common in women than men (_{1,3}). Its presentation as virilization is a very rare. These functioning tumours may secrete increased amount of glucocorticoids,

mineralocorticoids and sex steroids. Androgen producing tumours cause virilization and marked elevations of serum testosterone and dehydroepiandrosterone. Its presentation only with virilizing symptoms is very rare (2).

With the advent of a newer imaging techniques most of the adrenal masses are detected in silent form (1% to 10%). The vast majority of these incidental adrenal masses are benign. The estimated prevalence of silent adrenal cortical carcinoma is less than 1 in 250,000 (1). The authors have recommended that the indicator of malignancy are: tumour diameter more than 6 cm, documented local invasion or metastasis, secretion of more than one class of corticosteroids, associated hypertension and hypokalaemia (4). In our case the size of the tumour was more than 6cm and has the presence of massive hemorrhage and necrosis, it was labeled as malignant lesion.

Adrenal cortical carcinoma can be diagnosed by ultrasonography, CT or MRI. These radiological techniques in the absence of spread cannot distinguish a malignant from benign process. Malignant tumour has heterogeneous appearance with focal or scattered echogenic zones resulting from intra tumoural hemorrhage, necrosis and fibrosis. CT scan can pick up even a small tumour of 1 cm diameter. The diagnosis of malignancy is based on the presence of direct local tissue invasion and metastasis (2,4). Percutaneous fine needle aspiration cytology under CT or USG guided is unreliable in pre-operative diagnosis and it is unable to differentiate adrenal adenoma from carcinoma. The surgical treatment consists of en block resection (1). Combination chemotherapy can be used in inoperable, recurrent and metastatic disease (1). Adjuvant therapy with mitotane has

been used in patients with localized, completely resected disease but its efficacy is questionable (5).

The prognosis of adrenal cortical carcinoma is poor if untreated with 20% survival at 1 year. The patient with functioning tumours has larger survival than those with non-functioning (6). The presence of distant metastasis reduces the tumours 5 years survival from 50% to 0% (1).

The virilizing adrenal cortical carcinoma is very rare. It can be diagnosed with USG, CT or MRI. These are labeled a malignant in the presence of size >6cm, local or distant metastasis. Surgical resection is the treatment of choice. Role of adjuvant therapy is questionable.

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