Adrenal Angiomyolipoma

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ABSTRACT

Adrenal angiomyolipoma is a rare tumour arising from the mesenchymal tissue containing fat cells. A 72 years old lady presented with right upper quadrant pain. She underwent laparotomy after relevant imaging and investigations and was found to have a right sided adrenal angiomyolipoma confirmed on histopathology, which was encasing the inferior vena cava and renal veins. Due to its diagnostic difficulty, potential to achieve large size and possible complications; surgeons and pathologists should keep angiomyolipoma in mind when dealing with an adrenal mass.


INTRODUCTION

Angiomyolipoma arises from the mesenchymal tissue in the perivascular epithelioid cells. This tumour poses a diagnostic difficulty to pathologists as it can resemble a variety of other tumours found in the adrenal gland.1 Angiomyolipoma is a relatively common occurrence in kidneys but a rare finding in the adrenal gland with very few cases reported so far.2

We describe this rare case in an old lady with right sided upper abdominal pain.

CASE REPORT

A 72 years old female presented with right upper quadrant pain for 2 months to Shifa International Hospital, Islamabad. Abdominal examination was normal and her vital signs in particular the blood pressure, were within normal range. She had no other complaints and her past medical and surgical history was unremarkable.

Baselines including electrolytes and liver functions tests were normal. Ultrasound abdomen showed a mass in the retroperitoneum. On CT scan, she was found to have a 9 x 8.9 cm supra renal, well defined, non-enhancing mass with central calcifications and fat attenuation with compression of the inferior vena cava (Figure 1). Hormone levels including serum cortisol and catecholamines were within normal range. These findings were suggestive of a non-functioning adrenal tumour with abundant fat. Due to symptoms and large size of tumour, the patient underwent a laparotomy.

A large tumour was found in the right adrenal gland growing behind the IVC upwards to the level of hepatic veins and extending to the left of the renal vein on the left side. Complete excision of the tumour was carried out (Figure 2). Histopathology revealed thin walled blood vessels with smooth muscle cells and fat cells within adrenal cortex. Patient had an uneventful recovery and was followed-up for 6 months with no complications.

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This case report describes a 9 cm adrenal angio-myolipoma encasing the inferior vena cava and renal veins. It was causing right upper abdominal pain. Most angiomyolipomas are detected incidentally. We prefer not to label this case as an incidentaloma as no other cause of patient's symptoms could be determined. For typical angiomyolipomas, high fat content on computed tomography (CT) and ultrasound (US) scanning is pathognomonic. Magnetic resonance is reserved for very large tumours or the atypical variety where CT and US may be equivocal.\(^3\) Incidentalomas arising from fatty tissue are quite rare and include myolipoma, lipoma, teratoma, liposarcoma and angiomyolipoma.\(^4\) Great attention in evaluation of diagnostic detail is required as angiomyolipomas pose diagnostic dilemma to pathologists and can be misdiagnosed as sarcomatoid carcinoma, carcinoma or sarcoma. Presence of mature fat cells, thin walled blood vessels and smooth muscle cells with peripherally compressed adrenal tissue help diagnosis.\(^1\) The largest adrenal angiomyolipoma excised successfully was about 15 x 16 cm size.\(^5\) In the present case, the size of the tumour was 9 x 8.9 cm.

Management of angiomyolipomas can be expectant or surgical, depending on the size and functionality of the tumour.\(^5\)^{6} Surgery is recommended for tumours greater than 5 cm in size or if the patient is symptomatic. Due to the risk of bleeding, large angiomyolipomas should be removed. Laparoscopic adrenalectomy is an option and has been used successfully for tumours upto 5 cm in size. It offers early postoperative recovery and lower mortality.\(^7\)^{8} In the present case, the patient underwent open adrenalectomy due to the large size of the tumour. There have been no reports of malignant change in any of these lesions but a long follow-up period is recommended, given the unknown clinical progression of these rare tumours.\(^9\)

Increased use of abdominal imaging has led to an increase in the detection of adrenal incidentalomas. When faced with a fatty adrenal mass, angiomyolipomas should be kept in mind due to their ability to reach large size, symptoms and potential to bleed.

**REFERENCES**