Int J Pharm Bio Sci 2014 July ; 5 (3) : (B) 1022 - 1025

Case Report Pathology

International Journal of Pharma and Bio Sciences ISSN 0975-6299

GIANT ANGIOMYOLIPOMA OF KIDNEY MIMICKING RENAL CELL CARCINOMA: A CASE REPORT

***MELLONIE.P, HEMALATHA GANAPATHY AND SUBHASHREE A.R**

Department of Pathology, Sree Balaji Medical College and Hospital , Works road, Chrompet , Chennai , Tamilnadu, India

ABSTRACT

Angiomyolipoma an uncommon benign neoplasm of the kidney is a triphasic tumour composed of angiomatous, smooth muscle and adipose tissue elements. They are usually associated with Tuberous sclerosis and commonly bilateral in presentation .Angiomyolipoma is often asymptomatic and is dedected incidentally in radiological studies and during autopsies. We present a rare case of a giant renal angiomyolipoma which presented with acute abdominal pain and mimicked renal cell carcinoma on imaging studies, thus creating a diagnostic challenge

KEYWORDS: Angiomyolipoma , Renal cell carcinoma, Unilateral, Kidney

***Corresponding author**

MELLONIE.P
Department of Pathology, Sree Balaji Medical College and Hospital , Works road, Chrompet , Chennai , Tamilnadu, India

INTRODUCTION

Angiomyolipoma is a uncommon benign tumour of the kidney. It is associated with tuberous sclerosis in 45 – 80 % of cases and is usually bilateral and asymptomatic. In patients without tuberous sclerosis, renal angiomyolipomas can be unilateral and tend to be larger.1Angiomyolipoma is a benign neoplasm consisting of varying amounts of mature adipose tissue, smooth muscle, and thick walled blood vessels. It is thought to arise from perivascular epithelioid cells. It shows female predominance and is rare before puberty.2 Diagnosis is made by demonstrating fat within the lesion on Computer Tomography (CT). However when the intra tumoural fat is less, it can mimic a renal cell carcinoma in which case histopathology will provide a definitive diagnosis.

CASE REPORT

A 67 years old woman presented in Surgical Out Patient Department of Sree Balaji Medical College with abdominal pain for 2 days. On examination, a large mass was palpable in the left side of abdomen, which was firm in consistency and tender.She had no lymphedema or other palpable lymph node. Ultrasonography revealed a well defined hyperechoic lesion noted of size 19.5 X 8.7 cm, arising from the upper pole of the left kidney extending upto the splenic hilum and midline. CT scan revealed a large well defined hypodense lesion showing heterogenous enhancement measuring 19.8 x 7.6x 4.5 cm arising from the upper pole of left kidney. No obvious fat attenuation was noted within the lesion. (Figure1). CT finding was suggestive of a malignant tumour , likely renal cell carcinoma. A radical nephrectomy was done .Post operative period was uneventful. The specimen was sent for histopathological examination. Grossly the specimen was well circumscribed and firm in consistency. Mass was measuring 20 X 9 X 4.5 cm and weighing 1250grams. The cut section appears yellowish brown with areas of hemorrhage (figure 2). Microscopy- tumour showed mature adipocytes, separated by fibrohyalinised septae showing vascular proliferation and area of smooth muscle cell in bundles (figure 3).

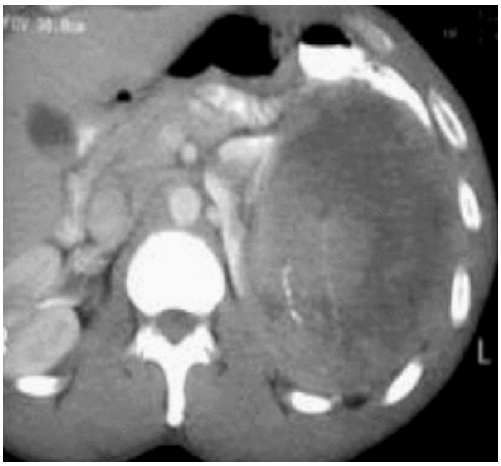

Figure 1
CT scan showing lesion

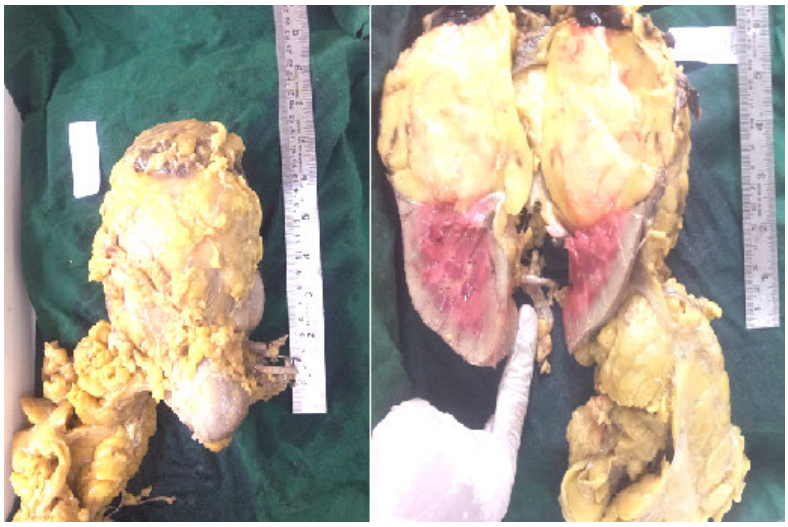

Figure 2
Gross Specimen showing renal Angiomyolipoma

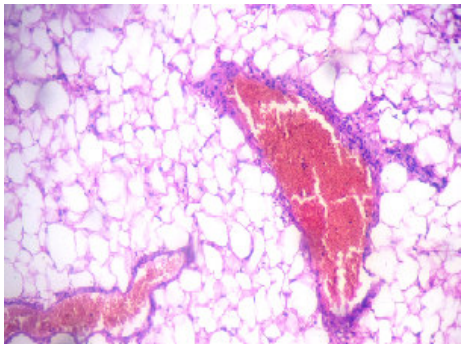

Figure 3
Histopathology – Angiomyolipoma

DISCUSSION

Angiomyolipoma is a rare benign tumour of the kidney.It is often associated with tuberous sclerosis with Female: Male predominance of 2:I. The mean age of presentation is 30 years. Patients with Angiomyolipoma not associated with tuberous sclerosis present later in life, during 5th or 6th decade and these tumours tend to be unilateral and larger than those associated with tuberous sclerosis. Tuberous sclerosis is an autosomal dominant disorder comprising adenoma sebaceum, mental retardation and epilepsy[1]. Angiomyolipoma consists of varying amount of mature adipose tissue, smooth muscle and thick walled blood vessels. It arises from perivascular epitheloid cell. Extrarenal occurrence has been reported in hilar lymphatics, retroperitoneum and liver and direct extension into the venous system. 2 On diagnostic imaging, it may mimic a malignancy.On ultrasonography, it appears as a well circumscribed, echogenic lesion arising from the renal parenchyma. On CT scan, it appears as a well defined hypodense lesion with fat attenuation (confined by a value of -20 to-80 Hounsfield units)[2] .Differential diagnosis includes renal cell carcinoma [6] and retroperitoneal liposarcoma [3]. Positive immunoreactivity for HMB-45 is characteristic for angiomyolipoma and can be used to differentiate it from sarcoma.[4, 5]. Patients with isolated lesions less than 4cm can be followed up with a yearly CT scan or ultrasonography to define the growth rate and clinical significance. Similarly, Patients with asymptomatic lesions greater than 4 cm should be followed up with semiannual

ultrasonography. Patients with lesions greater than 4 cm with symptoms (bleeding or pain) should undergo surgical intervention either in the form of tumour excision with or without nephrectomy, renal-sparing surgery or renal arterial embolization[2]. Complications such as, Retroperitonal hemorrhage, hematuria, hypovolemic shock, hypertension, abscess formation can occur.

CONCLUSION

Angiomyolipoma is a rare benign tumour of the kidney[5] .Large and unilateral tumours with no demonstrable intra tumoural fat on CT can create a diagnostic dielemma by mimicking renal cell carcinoma. Histopathology provides definitive diagnosis in these cases.

REFERENCES

1. Smith and Tanagho's. General urology. McGraw- Hill & Lange. 18th ed. Chapter 22: 330-31.
2. Campbell - Walsh Urology. Renal Tumours. WB. Saunders; Philadelphia, PA. 9th edition.Chapter- 47:1578-80
3. Steiner MS, Goldman SM, Fishman EK, Marshall FF. The natural history of renal angiomyolipoma. J Urol. 1993, 150:1782-86.
4. De la Cruz Ruiz M, Rivero M, Fernandez DL. Giant renal angiomyolipoma. Arch EspUrol 1999; 52: 381–5
5. Hostis HL, Deminiere C, Ferriere JM. Renal angiomyolipoma: a clinicopathologic, immunohistochemical, and follow-up study of 46 cases. Am J Pathol 1999; 23: 1011–20.
6. Shankhajit de, Saroj Singhmura and Ajoy Kumar Ghosh. Overview on renal cell carcinoma. International journal of pharma and bio sciences 2010; vol.1/issue-3/jul-sep.