

Delayed Treatment of Giant Oncocytoma; A Case Report

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Abstract

Renal tumors may be malignant or benign. Oncocytomas are one of the common renal tumors. 30% of tumors less than 2cm are benign they are usually asymptomatic. Some patients with oncocytomas may have symptoms like abdominal pain and haematuria.

A 72 year old man presented with a progressively increasing abdominal swelling of 6 years duration. There was no pain, no haematuria, no change in bowel habits. He was not jaundiced and did not have facial or pedal oedema. His blood work was essentially normal with a creatinine of 98 μ mol/L and a haemoglobin level of 12g/dl. A contrast enhanced Computer tomography scan showed a huge, heterogeneously enhancing left renal mass. He has exploratory laparotomy with left nephrectomy. The tumor weighed 4.3kg and measured 26x22cm. Histology of the lesion revealed an oncocytoma with no pericapsular invasion.

Renal oncocytomas were first described by Zippel in 1942 and were initially thought to be malignant. Oncocytoma of the kidney occurs more in the seventh decade of life and more common in males than females. There are no definitive criteria on CT scan to differentiate oncocytomas from renal cell carcinomas though oncocytomas may have a central scar and hypervascularity. This does not definitely identify oncocytoma. Oncocytoma may coexist with renal cell carcinoma. There are varied opinions as to the ideal treatment for oncocytoma. Most surgeons prefer to operate on the patient.

Key words: Renal tumors, renal oncocytoma

INTRODUCTION

Renal tumors are one of the reasons for referral urology clinic.¹ The incidence of renal cell carcinoma (RCC) increased significantly due to the advent of advanced imaging techniques.^{1,2} Malignant tumors of the Kidney make up 2% of all cancers and account 12,000 deaths annually.^{3,4} However not all renal tumors are malignant. 15% of renal tumors are benign. 30% of tumors less than 2cm are benign while 20% of tumors more than 4cm are benign.⁵ Renal oncocytoma is a commonly diagnosed benign renal neoplasm and makes up 5-7% of renal neoplasms.⁶ Most are diagnosed incidentally but a few may present with pain, haematuria and abdominal mass. We are presenting a case of a giant renal oncocytoma.

CASE REPORT

A 72 year old male presented to the Department of Surgery (urology unit), Rivers State University Teaching Hospital Port Harcourt. He is a mechanical engineer and of Ikwerre extraction, Rivers State Nigeria. His complaint was that of an abdominal swelling of 6 years duration. Swelling was progressive over the period. There was no pain, no haematuria, no change in bowel habits. He was not jaundiced and did not have facial or pedal oedema. He was diagnosed to be hypertensive 21 years ago and had been on medications with good blood pressure control. He took alcohol occasionally but did not take tobacco products in any form. There was no known family history of similar diseases or any other malignancy. There was no difficulty breathing, cough or chest pain. He did not have a history of headaches or altered sensorium.

At presentation his vital signs were stable with a pulse rate of 73 per minute, blood pressure of 128/74mmhg, respiratory was 18 cycles per minute and his temperature was 36.6 degree Celsius. His chest was clinically clear. Abdominal examination revealed an enlarged abdomen with a mass. The mass moved with respiration firm and soft areas. Digital rectal examination revealed a mildly enlarged and firm prostate.

His blood work was essentially normal with a creatinine of 98 μ mol/L and a haemoglobin level of 12g/dl. A contrast enhanced Computer tomography scan showed a huge, heterogeneously enhancing left renal mass. There was no lymphadenopathy, liver metastasis or ascites. The contralateral kidney was normal. He initially presented to a peripheral hospital 6 months after onset of symptoms and was offered surgery but he declined for financial reasons.

He has exploratory laparotomy with left nephrectomy. The tumor weighed 4.3kg and measured 26x22cm. Histology of the lesion revealed an oncocytoma with no pericapsular invasion.



DISCUSSION

The incidence Oncocytomas of the kidney is highest in the seventh decade of life. It is more common in males than females.⁹ The index patient was male and in the seventh decade of his life. Oncocytoma is the second most common benign renal tumor. Renal oncocytomas makes up 18% of small renal masses and 3-7% of all renal masses.¹⁰ renal oncocytomas were first described by Zippel in 1942 and were initially thought to be malignant.¹¹

There are no definitive criteria on Computer tomography (CT) scan to differentiate oncocytomas from renal cell carcinomas though oncocytomas may have a central scar and hypervascularity. This does not definitely identify oncocytoma and oncocytoma may coexist with renal cell carcinoma.^{12-14.}

Magnetic resonance imaging (MRI) conventionally uses the T-1 and T-2 weighted images. RCC may have a heterogeneous isointensity on T-1 weighted image. Oncocytomas may show hyper intensity on T-2 weighted images. There is considerable overlap in the imaging features of RCC and oncocytoma using these modalities.^{15,16}

There are reports improved imaging modalities to differentiate oncocytomas from RCC. Diffusion-weighted imaging (DWI) and contrast enhanced MRI was reported by Taouli et al¹⁷ to have 100% sensitivity and 86% specificity in characterizing renal tumors, they reported that renal oncocytomas displayed an apparent diffusion coefficient (ADC) that was higher than RCC. However, there are other reports that negate the above findings.¹⁸

The index patient had a contrast enhancing lesion which could have been confused for a renal cell carcinoma but because of the prolonged history of his condition and the fact that he had such a large lesion that was confined to the kidney without any lymphadenopathy and metastasis we considered the possibility of a benign lesion.

The treatment varies with clinical scenarios. Treatment may be open or laparoscopic, radical/partial nephrectomy or thermal ablation.¹⁹ Oncocytomas appear brownish and are usually well encapsulated. Microscopically they consist of Polygonal cells with uniform distinct nucleoli and eosinophilic cytoplasm.²⁰

Oncocytoma are said to be giant when the smallest diameter exceeds 15cm.^{21,22} Quid et al²³ reported a 15x19.5cm oncocytoma, Sundararajan et al²⁰ reported a 20cm oncocytoma in our case the size was 22x26cm making it a giant oncocytoma.

The preoperative histological diagnosis of renal tumors can be achieved by image guided biopsies. This may be beneficial in small lesions to avoid the nephron loss from radical surgery for benign lesions.²⁴

There are varied opinions as to the ideal treatment for oncocytoma. Most surgeons prefer to operate on the patient. The reason for their choice is because of the risk of leaving a malignant tumor in a patient because of the challenges of distinguishing between an oncocytoma and RCC.²⁵ Another reason why surgery is preferred by some surgeons is because of the risk of developing chronic kidney disease from the pressure of the tumor on the renal parenchyma it grows over time.²⁶ When oncocytomas are greater than 5cm or annually increase by 5mm or more they be surgically removed.²⁷ our patient had radical nephrectomy when his tumor was very large because he did not have he funds for his treatment earlier. If his tumor was malignant he would probably have developed into an advanced disease or he may have lost his life. This emphasizes the need for health policies and insurance especially for indigent patients in our society.

CONCLUSION

Renal oncocytomas are benign lesions that radiologically appear similar to renal cell carcinomas. They may be managed conservatively but, in some cases, surgical intervention may be required especially they large and may compromise renal function.

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