Available online at www.sciencedirect.com
ScienceDirect
Journal of Medical Colleges of PLA 25 (2010)317-320

JOURNAL OF MEDICAL COLLEGES OF PLA

www.elsevier.com/locate/jmcpla

# Myelolipoma of the kidney: a seldom site for a rare extra-adrenal tumor

Tang Xuefeng, Chen Rui*, Xu Jianping, Ye Mingfu

*Department of Pathology, Xinqiao Hospital, Third Military Medical University, Chongqing 400037, China*

Received 15 August 2010; accepted 18 October 2010

**Abstract**

Myelolipoma of the extra-adrenal gland is a rare, benign tumor comprising mature fat tissue and hematopoietic elements. Most myelolipomas are asymptomic and discovered incidentally. We presented a 44-year-old male who was admitted to our hospital for right kidney dystrophy and renal calculus. Ultrasound examination of right kidneys showed hydronephrosis. Intravenous pyelography showed the right renal contour was unclear, with a circular high-density shadow inside. The nephrectomy was performed with renal myelolipoma as a final pathologic diagnosis.

*Keywords*: Myelolipoma; Extra-adrenal myelolipoma; Kidney tumor

## 1. Introduction

Myelolipoma is a benign tumor composed of adipose tissue and hematopoietic elements resembling bone marrow, which is most commonly found in the adrenal gland. Extra-adrenal myelolipoma is rare. We present a case of renal myelolipoma and only one previous case has been reported to the best of our knowledge.

*Corresponding author.

Tel.:023-68774697, *E-mail address*: run.chen@gmail.com(Chen R.)

## 2. Case report

A 44-year-old man was admitted to our hospital for right kidney dystrophy and renal calculus in 20 October 2009. Ultrasound examination of right kidneys showed hydronephrosis. Intravenous pyelography showed the right renal contour was unclear, with a circular high-density shadow inside, after injection of contrast agent, X-rays taken at specific time intervals did not demonstrate the right renal pelvis, renal calices and ureter. Dynamic single photon emission computed tomography (SPECT)

evaluation of renal plasma flow using Technetium-99m diethylene triamine penlaacetic acid （DTPA） also did not detect the right kidney and glomerular filtration rate(GFR) of the left kidney was 76.43 ml/min, while GFR of the right kidney was only 4.95 ml/min (Fig. 1).

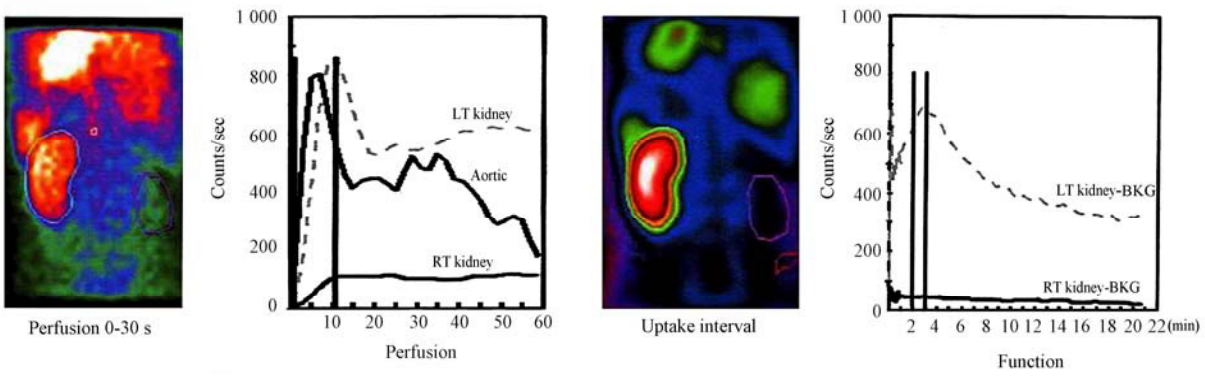


Fig. 1. Dynamic SPECT of renal plasma flow using Technetium-99m DTPA. The right kidney was not detected while the left kidney appeared hypertrophy. GFR of the left kidney was 76.43 ml/min, while GFR of the right kidney was only 4.95 ml/min. SPECT: Single photon emission computed tomography. DTPA: Diethylene triamine penlaacetic acid. GFR: Glomerular filtration rate.

The patient was asymptomatic and laboratory investigation revealed no abnormal findings. The nephrectomy was performed. On gross examination, the right kidney removed from the patient was irregular in shape and weighed 90 g, measured 9 cm× 4.5 cm × 3 cm. There was a well-circumscribed, solid mass with the size of 6 cm × 4 cm × 3 cm in the kidney. The cut surface composed of half area of hard grey white, brownish tissue and the other half of soft yellow fatty tissue (Fig.2). The hard area needed to be decalcificated for further disposal.

Microscopic examination of the tumor demonstrated fat and hematopoietic precursor cells similar to those found in normal bone marrow. Representation of all the 3 hematopoietic cell lineages(granulocytic, erythroid, and megakaryocytic) was observed. Calcification and hemorrhage were easily found. The pathologic diagnosis was renal myelolipoma. See Fig. 3 and Fig. 4.


Fig.2. Gross photogram of the well-circumscribed solid tumor in right kidney. The cut surface was composed of half area of hard grey white, brownish tissue (above) and half area of soft yellow fatty tissue (below). The surrounding tissues of the lesion were cystic with atrophied renal parenchyma.