

# Bilateral Renal-Perirenal Lymphangiomatosis: Ct and Mri Findings

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## Abstract:

Renal lymphangiectasia is a rare, benign developmental disease of the kidney characterized by abnormal enlargement of the intrarenal and/or perirenal lymphatics.

Diagnosis of Lymphangiomatosis can be done by CT and MRI.

Here, We report a case of bilateral intrarenal and perirenal lymphangiectasia with CT and MRI findings.

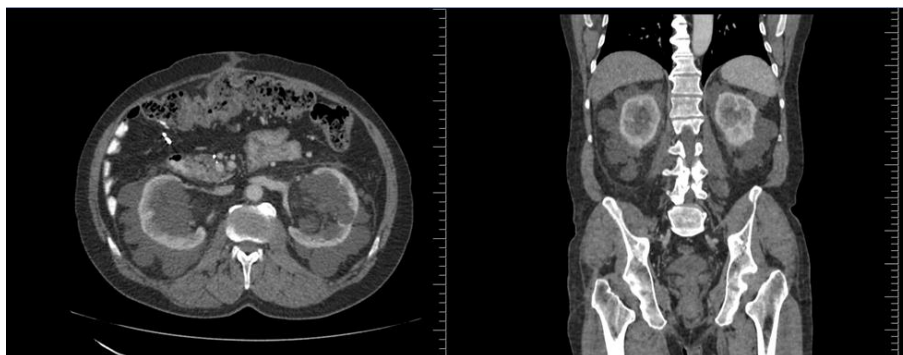
**Keywords:** renal-lymphangioma-ct-mri

## Introduction

Renal lymphangiectasia is a rare, benign developmental disease of the kidney characterized by abnormal enlargement of the intrarenal and/or perirenal lymphatics. This condition, often asymptomatic, can be congenital or acquired, it may be due to renal failure and/or hypertension in undiagnosed patients[1] Diagnosis of Lymphangiomatosis can be done by cross-sectional imaging methods, Computerized Tomography(CT) and Magnetic Resonance Imaging (MRI) without any need for an invasive procedure[2]. In this case, we presented the CT and MRI findings of the patient who was diagnosed with bilateral intrarenal and perirenal lymphangiectasia.

## Case Report

57-year-old male patient was under follow-up due to a previous colon tumor and surgery. In his routine Contrast-enhanced Abdominopelvic CT: Multiple bilateral perirenal and intramedullary cysts were observed. The cysts did not compress the renal cortex, surrounded the cortex and perirenal fatty tissue, were in conglomerated appearance and showed a hypodense surrounding feature with an average density of 8.5 HU. Bilateral kidney sizes and parenchymal thicknesses were in normal range, bilateral corticomedullary separations in both kidneys were clearly performed (**Figure.1**)

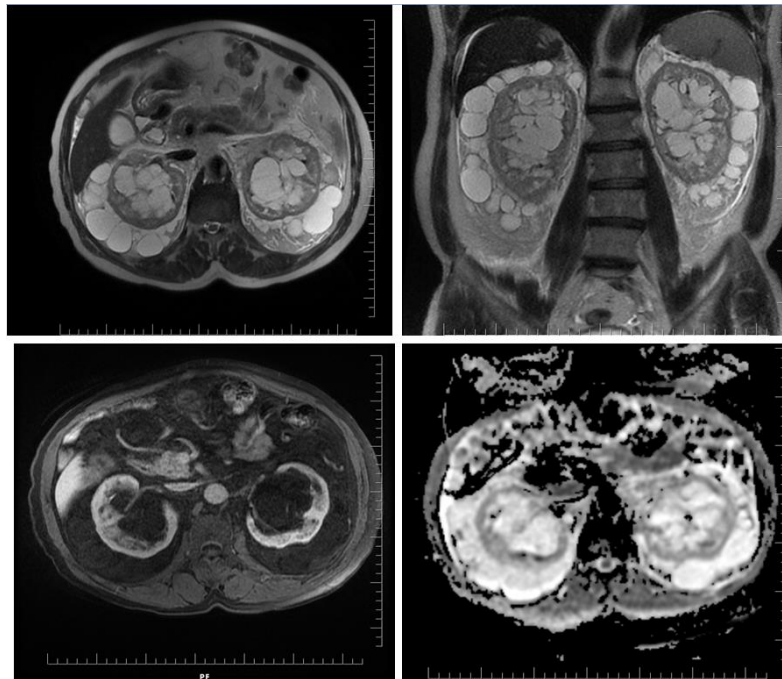


**Figure 1: a-b: Renal and perirenal Lymphangiomas in the axial and coronal contrast enhanced CT**

Dynamic abdominal MRI was requested from the patient in order to exclude possible cystic metastases of colon tumor. Lesions were diagnosed as "renal lymphangiomatosis in MRI those were

hyperintense on T2W images, without any diffusion restrictions on DW images, and without any enhancement in the postcontrast acquisitions. There was a discrete connection between the intrarenal

and perirenal lymphangiomas which was thought to be a lymphatic drainage and leakage (**Figure .2**)



**Figure 2a-d: Bilateral hyperintense Lymphangiomas in axial and Coronal T2W images.**

These renal and perirenal Lymphangiomas do not enhance in contrast enhanced axial MRI and do not show any diffusion restrictions on ADC mapping.

In the routine follow-ups: There was no increase in the size, amount and dimensions of the renal-perirenal cysts.

## Discussion

Renal and perirenal lymphangiectasias are rare diseases of kidneys with dilatation of the renal lymphatics, seen in both children and adults. They can be unilateral and/or bilateral, occur equally in both sexes, are also known as renal lymphangiomatosis, renal lymphangiomas and renal hygromas [1-3]. Since these lymphangiectasias were manifested by perirenal, intrarenal and parapelvic cystic structures due to the dilatation of lymphatic vessels, it should be considered in the differential diagnosis of renal pathologies such as hydronephrosis, medullary lipomatosis and other cystic renal diseases particularly with the autosomal recessive polycystic kidney diseases of childhood [1,4,5].

Renal lymphangiectasias are known to be congenital and benign, hereditary cases have also been reported although they were mostly sporadic[4-6]. USG, CT and MRI have typical imaging appearances and have a great role in the diagnosis of Lymphangiomatosis. On CT, typical findings are: The cysts located in perirenal and/or parapelvic region with fluid density, with or without any septa, without any compression towards the renal parenchyma, with prominent conglomerating features and without any contrast enhancement. On MRI, the appearance of cysts that appear hypointense on T1W and hyperintense on T2W sequences, are typical[4,6,7].

In most of the cases, no treatment is required, follow-up of lymphangiomas is sufficient. Percutaneous aspiration and nephrectomy can be applied in complicated patients[3,8].

In our case, there was no familial history without any clinical complaints. The diagnosis was made by contrast-enhanced

abdominal CT and with dynamic abdominal MRI. Any invasive procedures like biopsy, fluid aspiration and cytology were not required in the diagnosis due to the typical imaging findings which were mainly included in the diagnosis of renal lymphangiectasias.

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