



Idiopathic renal infarction: A new case report

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ARTICLE INFO

Keywords:
 Infarction
 Arteriography
 Nephretic colic
 Idiopathic

ABSTRACT

Acute renal infarction is a rare condition that should be considered in the diagnosis of nephretic colic, idiopathic renal infarction is extremely rare with only few cases in literatures. We report a case of a 43-years-old patient who consulted for flank pain. The diagnosis of idiopathic renal infarction was confirmed by CT scan and arteriography. The treatment was based on anticoagulation.

Introduction

Acute renal infarction is an uncommon and under diagnosed condition. Different pathologies are known to be the cause of acute renal ischemia. However, we reported a rare case of idiopathic renal infarction.

Observation

A 43-years-old man with no medical past history was referred to our department of urology with two days history of a right renal colic with no hematuria or urinary symptoms. Physical examination was normal except a 38,2° fever and right flank tenderness. Laboratory tests revealed a slight increase in white blood cells (13,630. 10³ UI/L), CRP was 133 mg/l, LDH was 418 U/L, creatinine was normal and CBEU was negative.

Given the persistence of pain and the normality of the renal ultrasound a CT scan was performed which revealed right renal infarction (Fig. 1). CT angiography showed patency of the renal arteries without images in favor of a dissection or embolus. There was no argument for arterial dysplasia, aneurysm or arteriovenous malformation (Fig. 2).

As part of the etiological diagnosis ECG was normal with a sinus rhythm and cardiac echography didn't reveal any anomalies. Minimal immunological tests: ANF, anti-DNA and antiphospholipid anti body were negative.

We initiated curative doses of intravenous heparin then relayed by anti vitamin K. During his hospitalization the patient did not present high blood pressure and pain has decreased. The follow up at three, six and twelve months didn't reveal an alteration of the renal function, or

modifications of the radiological lesions.

Discussion

Renal infarction is an uncommon cause of low-back pain with an estimated prevalence of 4–7 cases per 100,000 inhabitants.¹ The diagnosis can be delayed because of a variable and nonspecific clinical presentation. In our case the diagnosis was made after 48 hours. Symptoms may be lower back pain, oliguria, nausea, vomiting and fever.² Microscopic hematuria was found in 60% of cases.³ Differential diagnoses include acute renal colic, acute pyelonephritis, acute abdomen and kidney tumor. Laboratory data are not specific, ascension in white blood cells and CRP can be found, slight alteration in kidney function is not uncommon and elevation of LDH is observed in most cases (93%).³ Kidney Doppler ultrasound presented low sensitivity for the diagnosis of renal ischemia (10%). The CT angiography remains the gold standard to make the diagnosis of the infarction and to eliminate the differential diagnoses.⁴ Its sensibility for the diagnosis is more than 90%.⁵

Several causes of renal infarction have been described in literature which is dominated by cardio embolic causes (90%).⁵ Atrial fibrillation is the most common cause (up to 65%), then come cardiac valvopathies and cardiomyopathies.¹ Arteriosclerosis, vasculitis, trauma and hypercoagulable conditions are the causes of thrombosis in situ.² In our case the etiological investigation was negative then we posed the diagnosis of idiopathic infarction which is extremely rare.

The treatment of renal infarction is based on anticoagulants and the duration of treatment depends on the etiology.³

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<https://doi.org/10.1016/j.eucr.2021.101752>

Received 30 May 2021; Received in revised form 8 June 2021; Accepted 9 June 2021

Available online 11 June 2021

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Fig. 1. CT scan showing lower right polar renal hypodensity with cortical enhancement “cortex corticis” suggesting a renal infarction.

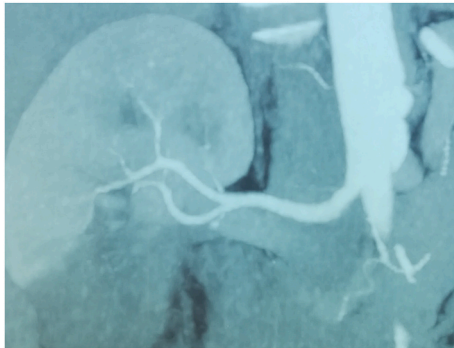


Fig. 2. Renal arteriography showing defect of perfusion of the inferior pole of the right kidney.

Conclusion

Renal infarction is a rare condition with a nonspecific clinical

presentation. In most cases the diagnosis is delayed. It's important to keep in mind that nephritic colic can hide a renal infarction.

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