The surgical repair of no-ruptured right renal artery aneurysm, a report of one case

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Abstract: We report the surgical management of one case of no-ruptured right renal aneurysm in a 25 year-old male patient admitted in the Department of Thoracic and Cardiovascular Surgery of the University Hospital in Dakar. He was complaining of low back pain associated with constipation without urinary disorders; no trauma was reported.

Keywords: Aneurysm - renal artery - surgery.

INTRODUCTION

The aneurysms of the renal artery are rare with a frequency varying between 0.03 and 1% Extra-parenchymal sites are common (85%) compared to intra-parenchymal sites. Regarding the shape, 70% of the aneurysms are saccular, 20% fusiform and 10% dissecting. [1] Most renal aneurysms are asymptomatic and their discovery is fortuitous. The Etiologies are dominated by atherosclerosis, fibrodysplasia, infections and trauma. Open surgery is not currently the commonest treatment since endovascular is the gold standard[2].

CASE REPORT

MD 25-year-old male admitted in emergency for low back pain with torsion associated with constipation in whom physical examination found hemodynamically stable patient: Blood pressure = 120/80 mmHg, pulsation = 95 /mn. On the right hypochondrium there was a beating and expansive mass. The peripheral pulse was well perceived. The lab tests found anemia (hemoglobin 10.3 g / dl) and inflammation syndrome (CRP = 73 mg / l). Renal function was normal (creatinine at 6.7 mg / min). Angioscanner showed an extra-renal aneurysm of the right renal artery 54X70 mm size [Figure 1]. Cardiac evaluation was normal. We performed median laparotomy that showed a voluminous no-ruptured aneurism of the middle third of the right unbroken renal artery then we took control of in and out arteries before rupturing the aneurysm. We repaired by end-to-end arterial anastomosis with 5/0 Prolène.

The follow-up was marked by ischemia of the superior pole of the right kidney as seen on the angioCT. Although creatinine control was normal. Then the clinical checks were satisfied. The patient was checked at M2 and the evolution was good.

DISCUSSION

Anatomically, the aneurysms are mainly localised on the arterial trunk and the branches of second order at the level of the bifurcations as in our patient. The classification of Poutasse distinguishes four types of renal arterial aneurysms: extra-parenchymatous sacciform, fusiform, dissecting and intra-parenchymatous [3,4].

Our patient was classified 2nd stage according to POUTASSE. Aneurysms are unique or sometimes multiple then associated with aneurysms of other viscera in a malformation context. [2]. No cause was found in our patient. In the largest series reported by Lacombe (123 patients), there are three etiologies. The most important is dysplasia representing 90% of cases.
Their morphology is mostly saccular with a fibrous collar and localizing near arterial divisions. Many authors point out that the general incidence rate of rupture is low [5,9] as it happened in our case.

The age of onset is in the majority of cases between 40 and 60 year-old in the literature. On the other hand our patient is relatively young suggesting fibromuscular dysplasia as etiology.

The clinical feature of our patient was poor. However, in the literature haematuria due to a rupture in the excretory cavities, or renovascular arterial hypertension were reported. The aneurysms of the renal artery are mostly located on the right side as in our patient [8,11]. They can be multiple in 1-30% of cases and bilateral in 10-25% of the cases. The angio-CT shows a saccular or fusiform contrast of the arterial time with a sensitivity and a specificity of 100%. The gold standard treatment remains endovascular but open surgery is still an alternative in Senegal that is lacking resources [1,10,12].

CONCLUSION
Aneurysm of renal artery is a rare disease in which surgery can improve both renal and patient prognosis.

REFERENCES