The Journal of Medical Research

Case Report

JMR 2023; 9(4):92-93
July- August
ISSN:2395-7565

www.medicinearticle.com
Received:07-07-2023
Accepted:26-08-2023
DOI: 10.31254/jmr.2023.9405

Congenital megacalice at Menontin Hospital in Benin: A case report and review of the literature

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Abstract

Background: Congenital megacalice of Puigvert is a rare congenital anomaly characterized by non-obstructive dilatation of the renal calyces with normal pelvis, ureter and bladder. **Clinic Observation:** We report the case of a left congenital megacaliceus without lithiasis or obstruction in a 36-year-old female patient discovered on uroscanner indicated for chronic abdominal pain. **Conclusion:** Congenital megacalice is a rare pathology, and only clinical and biological monitoring remains the basis of its management.

Keywords: Megacalice, Chronic abdominal pain, Uroscanner.

INTRODUCTION

Megacalice is a rare congenital anomaly of the intra-renal urinary tract characterized by non-obstructive dilated calyces. The term was first coined by Puigvert in 1964 [1]. In the past, it was found only in Caucasians, with a strong male predominance [2]. Megacaliceus is most often discovered by chance on intravenous urography (IVU) or renal ultrasonography to investigate non-specific clinical signs; the disease is not progressive and does not require surgical intervention unless there are complications [3]. We report the case of a patient suffering from chronic abdominal pain carrying congenital megacaliceus.

Clinical observation

This was a 36-year-old woman seen in consultation for non-radiating left abdominal-lumbar pain, calmed by analgesics and anti-inflammatories; no notion of urinary infection, haematuria or previous lithiasis pathology. The patient was a well-monitored sickle-cell anaemic SC whose recent vaso-occlusive crisis was more than a month old. Her father had died of kidney cancer. The physical examination was unremarkable.

The laboratory work-up was unremarkable, with a normal renal work-up and a negative urine cytobacteriological examination (UCOE).

Ultrasound examination of the urinary tract suggested a left renal cortical cyst, and the uroscanner revealed a dilated left posterior middle calyx measuring 60 x 24 mm with no obstructions, normal cortical thickness, normal and synchronous renal secretion and excretion, normal renal pelvis and ureter, and normal right kidney (figure 1).

A technetium-99m-MAG3 renal scan was not performed. All these radiological investigations confirmed the diagnosis of megacalice.

In the absence of recurrent urinary tract infection and alteration of the renal balance, treatment was conservative and symptomatic, with administration of analgesics as required and, above all, annual clinical, biological and radiological monitoring.

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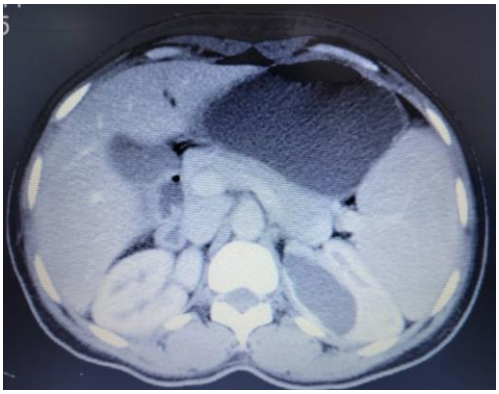

Figure 1: Left megacaliceus

DISCUSSION

Congenital megacaliceus is a developmental anomaly of the kidney consisting of underdevelopment of the renal pyramids and non-obstructive dilatation of the calyces [1,2,3,4].

The most important feature of congenital megacaliceus is the absence of any obstructive mechanism; it is benign and non-progressive [5,6,7].

In the past, it has been misdiagnosed as obstructive hydronephrosis, with unwarranted attempts at surgical treatment [5]. It is more common in men than in women, and particularly affects Caucasians [2]. We report this case in a black woman.

The patient's age at diagnosis varies from 5 to 60 years, but the majority are in their third and fourth decades, as in our patient [5].

To date, the pathogenesis remains poorly elucidated, but could be the result of a transient delay in recanalization of the lumbar ureter after the ureteral bud connects to the metanephros. Another hypothesis is that underdevelopment of the pyramids, with absence of papillary projection into the calyces, probably leads to calyx dilatation [8].

IVUS used to be the investigation of choice for diagnosis, as it explores the entire urinary tract and provides information on the calyx-ureter-bassinet triad of the kidney [5,6], but nowadays it is increasingly substituted by uroscanner, which has become the radiological tool of reference for diagnosis due to its superior performance to IVUS [9].Megacaliceus is neither progressive nor obstructive; surgical treatment is not necessary unless there are complications [5,10]. Treatment should aim to control urinary tract infections with appropriate antibiotics and attempt to minimize stone formation with ample fluid intake [4,5,6].

CONCLUSION

Congenital megacaliceus is a pathology that remains rare, is non-obstructive and non-progressive, and should not be confused with obstructive uropathy. Therapeutic abstention and monitoring remain the recommended therapeutic attitude.

Conflict of interest and funding

The authors report no conflicts of interest in relation to this work.

Consent for publication

The patient's consent has been obtained for the publication and sharing of images.

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