Endourology

Pancake kidney: A case report

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Introduction

Urinary tract defects, also called malformative uropathies, are ranked third behind cardiovascular and orthopaedic malformations. They include extremely varied abnormalities; some of them are specific to the kidney, ureter, bladder or urethra. There are many developmental renal anomalies.

Case report

A 53-year-old patient presented with renal colics of two months duration. Clinical examination was normal. Biology showed a normal renal function. An ultrasound of the urinary tract revealed two discoid pelvic kidneys with dilation of right renal pelvis and calyces. A CT scan concluded to pancake kidneys with right ureteropelvic junction obstruction, associated to multiple renal calculi (Figs. 1 and 2). Thus, the patient was approached through iliac incision. Exploration found two abnormal rotation pelvic pancake kidneys, connected by their outer

Fig. 1. A contrast-enhanced computed tomography abdomen scan in the coronal section showing the pancake kidney placed in the pelvis with right ureteropelvic junction obstruction, associated to multiple renal stones.

Fig. 2. The pancake kidney placed in the pelvis with right ureteropelvic junction obstruction.
edges. He underwent a Kuss-Anderson-Hynes pyeloplasty, kidney stone fragments were removed (Fig. 3).

Discussion

Kidney fusion anomalies were first described in 1938 by Wilmer. There are two types of abnormalities. Pancake kidneys are connected by their poles and they form a parenchymatous mass in pelvic position. There may be two normal ureters. Renal pelvis may communicate with one or two ureters. Pancake kidney is an extremely rare entity with unknown incidence. Looney and Duke were first to describe the pancake kidney. More men are affected than women. It can be diagnosed at any age and is frequently associated with other urinary tract defects. Pancake kidney exposes to urinary infections and renal calculi, probably caused by rotation abnormalities and the short length of ureters, which favor obstruction and stasis. Clinically, patients with pancake kidney are generally asymptomatic. They sometimes have recurrent urinary infections, abdominal pain, and even extra urinary signs such as amenorrhea and iliac aneurysm. Patients with pancake kidney don't necessarily have renal insufficiency. Asymptomatic patients will have regular checks of renal function. Generally, we try our best to avoid unnecessary explorations and invasive procedures.

Conclusion

Urinary system anomalies often coexist with malformations of other organs. Pancake kidney is treated by surgery.

Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this article.

References