VIDEOABSTRACT

VIDEOSURGERY

Different treatment approaches after failure of laparascopic treatment of calyceal diverticulum confused with communicating-type renal cyst: Case report

Video can be found at http://www.ceju.online/journal/10000/laparoscopic-surgery-Calyceal-Diverticulum-renal-cyst-1333.php

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The term calyceal diverticulum refers to a urine-containing cystic cavity within the renal parenchyma. The calyceal diverticulum is lined by transitional epithelium and communicates with the collecting system via a narrow isthmus or infundibulum. Demonstrating a connection between this fluid-filled space and the pelvicalyceal system in contrast studies, such as computed tomography or urography is the key diagnostic finding. Diagnostic difficulties are related to their resemblance to other cystic lesions, including simple cysts, hydronephrotic dilatation of the pelvicalyceal system in a duplex kidney, and cystic renal tumors. There are two recognised types. Type 1 is the more common form, which communicates with a renal calyx and is usually found in the upper pole. Type 2 is less common, larger, communicates directly with the renal pelvis, and is found in the interpolar region of the kidney. Type 2 calyceal diverticula may also be termed pyelocalyceal diverticula, reflecting their communication with the renal pelvis. They are generally benign and asymptomatic, although complications include infection and stone formation. Occurrence of complications may be an indication for treatment.

In this study, a different treatment approach wass presented for a calyceal diverticulum that was radiologically misdiagnosed as a communicating-type renal cyst. This misdiagnosis led to previous unsuccessful laparoscopic management and further ultrasound-guided percutaneous aspiration and alcohol injection.

A 40-year old female presented to our hospital owing to a left flank pain. Ultrasound (US) and computed tomography (CT) scans revealed a huge renal cyst, measuring 121x97x72 mm arising from mid-pole on the lateral side of the left kidney (probably type 2 calyceal diverticula). Further evaluation with CT scan showed the presence of contrast agent extravasation into the renal cyst on late phase imaging. Transperitoneal laparoscopic management was preferred due to a symptomatic communicating-type renal cyst. The first step was the insertion of a ureteral catheter in the lithotomy position to provide access to retrograde instillation of methilen blue. A conventional laparoscopy set and 30 degrees telescope were used. A four trocar laparoscopic decortication of the renal cyst and closure of the communicating channel by suturing (4/0 Vicryl) were performed for treatment in a 45 degrees lateral decubitus position. A retrograde pyelography was performed to confirm no extravasation. A JJ stent was inserted in the dorsal lithotomy position following the laparoscopic

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approach. Histopathological examination revealed that the cystic lesion was lined with urothelium originating from the pelvicalyceal system. Because of this unexpected pathological result and recurrence of the cyst, alcohol ablation was planned in the post operative period. A cystography demonstrated no extravasation and then alcohol ablation was performed. Despite the alcohol injection both the pain and the cyst were sustained, so an open surgical approach was performed including the following steps; excision of the diverticulum and then urothelium; the cauterization of the sub-epithelium and primer defect repair of the renal parenchyma in the right flank position. The patient was discharged on the fifth post-operative day. Histopathological examination revealed no evidence of neither urothelium nor other epithelial cells, probably due to alcohol ablation.

Calyceal diverticulum should be kept in mind in the differential diagnosis of communicating-type renal cysts.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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