

## Spontaneous nephrocolic fistula secondary to a staghorn calculus

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A 54-year-old woman—with no past surgical history—presented to the emergency department with an 8-day history of abdominal pain in the left flank and diarrhea. Initially, the patient underwent an abdominal ultrasound that showed a lower pole kidney mass. Computed tomography was performed and revealed a fragmented staghorn calculus complicated with a xanthogranulomatous pyelonephritis in the left kidney (Fig. 1). The cleavage plane between the left kidney and the colon was undistinguished and a nephrocolic fistula (arrows) was diagnosed. To confirm this finding a barium enema was carried out: demonstrating passage of intravenous contrast from the colon to the kidney. Finally, the patient was taken to the surgery room where nephrectomy and left hemicolectomy were carried out.

Few nephrointestinal fistulae have been described in the literature, and the cases of spontaneous appearance of this condition are even scarce [1]. The most common cause of spontaneous nephrocolic fistulae involves staghorn calculi [2]. These calculi are formed of a rapidly growing stone and are mainly composed of struvite–carbonate–apatite



**Fig. 1** Abdominal computed tomography. Axial view of the abdomen demonstrating the nephrocolic fistula (arrows) and the presence of a staghorn calculus

matrix. These stones are likely to cause great morbidity and mortality if not treated. Treatment frequently includes: percutaneous nephrolithotomy, followed by extracorporeal shock wave lithotripsy and/or flexible ureteroscopy, and laser [3]. Imaging procedures—abdominal X-rays and computed tomography—are the best diagnostic tools to be used in this condition.

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