CASE REPORT

Renocolic fistula following radiofrequency ablation of a renal tumor. A rare case report and review of the literature

P. Mourmouris¹, M. Mperdempes¹, T. Markopoulos¹, C. Papachristou², A. Skolarikos¹
¹2nd Department of Urology, University of Athens, Sismanogleio General Hospital, Athens, Greece
²Urology Department, EL.AS., Athens, Greece

Abstract
Data in the literature concerning fistula formation between colon and kidney are limited in no more than 50 case reports with the majority of them representing complications of bowel surgery or disease. There are sparse and limited data concerning fistula formation after urological procedures. We report a case of fistula formation between calyx and colon after RFA for kidney tumor and we review the literature about this rare entity.

Introduction
Data in the literature concerning fistula formation between colon and kidney are limited in no more than 50 case reports. The majority of them are complications of bowel surgery [1,2] or bowel disease like Crohn’s disease or diverticulitis [3]. Nevertheless urological diseases and surgeries can potentially result in this rare complication with kidney surgeries due to lithiasis and renal abscess account for the majority of the cases [4–9]. We report a case of a fistula formation between renal calyx and colon after radiofrequency ablation (RFA) for a kidney tumor.

Case Report
Our patient is a 44 years old female with a history of right radical nephrectomy due to renal tumor 12 years ago. She has suffered from Von-Hippel-Lindau syndrome and seven years before she was diagnosed with a new renal tumor on the left kidney this time, which was managed with ultrasound guided radiofrequency ablation (RFA). Another tumor appeared 7 months ago for which she underwent ultrasound guided RF ablation, which failed to eradicate the tumor and another try was performed, computed tomography (CT) guid-
Renocolic fistula following radiofrequency ablation of a renal tumor. A rare case report and review of the literature, p. 44-46

ed this time, one month ago. One month after the last RF operation she was admitted to the emergency department due to anuria, diarrhea with urine content. The CT imaging revealed gas (Figure 1) inside the calyceal system and ureter and oral taken contrast material inside renal middle calyx (Figure 2). A fistula between colon and lower pole renal calyx was diagnosed and the patient underwent a left percutaneous nephroureteral stent placement.

After her last treatment her condition was deteriorating and so she was referred to our department. We immediately started parental nutrition and broad spectrum antibiotics. Ten days after starting conservative treatment no improvement was observed and a colonoscopy was scheduled during which the fistula orifice has been visualized and clipped. Two weeks after the colonoscopic management of the fistula there was no satisfactory improvement on patient’s condition (leakage was not reduced) and so surgical repair was decided. During the operation the fistula has been identified and excised (Figure 3), the colon was mobilized and a right colectomy with an end to end anastomosis was performed. Finally the calyceal system was sutured (Figure 4) and a renorraphy was performed. Patient’s condition improved significantly and two weeks after the operation the previous stent was removed, a retrograde urography was performed with no leakage observed and a JJ stent was then placed. A CT imaging 4 weeks after the surgery didn’t show any leakage and so the stent was removed uneventfully.

Discussion
Despite the fact that a reno-colic fistula formation is addressed as a possible consequence of RFA, it is not a well-known complication because of its rarity. There are three case reports in the literature concerning this kind of complication with the first one describ-
Renocolic fistula following radiofrequency ablation of a renal tumor: A rare case report and review of the literature, p. 44-46

A rare case of a fistula between duodenum and kidney after RFA for a renal tumor [10]. Most recently two case reports were published concerning participation of the colon and the kidney in the fistula formation [11-12]. Even though all these cases were managed surgically there are data in the literature that imply that conservative treatment is feasible especially when sepsis or other major complication exist [13-15]. In our case conservative and endoscopic treatment failed to manage patient’s condition and so surgical repair was utilized with excellent results.

Conflicts of interest
The author declared no conflict of interest.

Τα δεδομένα στην βιβλιογραφία για συρίγγια μεταξύ νεφρού και εντέρου είναι πολύ περιορισμένα. Συνήθως τα συρίγγια αυτά οφείλονται σε φλεγμονώδη νόσο στο περιβάλλον ή σε επιπλοκές διατροφικές επικινδύνες μεταξύ νεφρού και εντέρου ως αποτέλεσμα υποπλοκικών επιπλοκών ή παθήσεων. Ο σκοπός της παρούσας μελέτης είναι να αναφέρουμε τη διάγνωση συρίγγιου μεταξύ νεφρικού κάλυκα και του εντέρου μετά από θεραπεία μέσω ραδιονομώντων όγκου του νεφρού και η επισκόπηση της βιβλιογραφίας για την αντιμετώπισή τους.

References