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A Rare Complication of Renal Stone: Incidentally Diagnosed Renogastric Fistula

Böbrek Taşının Nadir Bir Komplikasyonu: İnsidental Tanı Konulan Renogastrik Fistül

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INTRODUCTION

The fistula of the kidney with the enteric tract is rarely seen. Most cases of reno-gastric fistula result from penetrating trauma, which may be iatrogenic, caused by locally invasive benign infectious processes, complicated nephrolithiasis, or occur following surgical procedures (1,2). Delays in the diagnosis or treatment of urological stone disease have been unavoidable in the context of the COVID-19 pandemic. In these patients, pain attacks, infection, or worsening renal dysfunction may occur during the delay (3). This delay can lead to extremely rare cases of renogastric fistulas.

We present a case where a 63-year-old woman with clinical symptoms suggestive of pyelonephritis was incidentally diagnosed to have a reno-gastric fistula as a consequence of treatment delay due to the COVID-19 outbreak.

ÖZET

Üriner sistem ile gastrointestinal sistem arasında fistüller nadiren görülmektedir. Reno-gastrik fistül olguları genellikle penetran travmaya sekonder, iyatrojenik olarak, komplike böbrek taşlarına ve enfektif süreçlere bağlı olarak oluşabilmektedir. Midenin pozisyonu nedeniyle hemen her zaman sol böbrek etkilenmektedir. Bu olgu sunumunda, böbrek taşı nedeniyle ameliyat önerilen fakat COVID-19 salgını nedeniyle ameliyat olmayan ve pyelonefrit bulguları ile başvuran 63 yaş kadın hastayı sunduk.

Hastaya reno-gastrik fistül tanısı konuldu ve böbreğe nefrostomi kateteri takılarak barsak istirahati uygulanmasının ardından böbrek taşı tedavi edildi.

Anahtar kelimeler: Kalkül, Fistül, Renal Kolik

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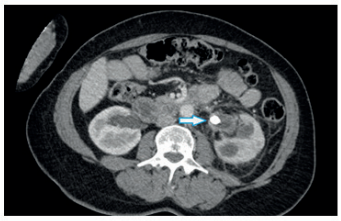
CASE

A 63-year-old woman presented with left flank pain and fever for one day. Past medical history was type 2 diabetes and well-controlled hypertension. She was diagnosed with a left kidney stone 16 months ago. The patient explained to us that she was not admitted to treatment because she feared going to the hospital due to the pandemic of Covid-19 and her pain was also relieved with painkillers during that period. She was febrile (temperature 38 degrees Celsius). Left costovertebral angle tenderness was found during at physical examination. The initial routine laboratory tests showed a hemoglobin level of 8.6 g/dL and a leucocyte count of 21.4 × 10^3/mm^3. C-reactive protein (CRP) and erythrocyte sedimentation rate (ESR) were elevated. She had pyuria on urine microscopy. Renal function was normal. CT images depicted a 12 mm left renal stone The patient was hospitalized and underwent USG-guided nephrostomy catheter placement. The nephrostogram and CT images showed a left reno-gastric fistula (Figure-1B). She was treated with intravenous metronidazole and ceftriaxone twice a day for 7 days. Bowel rest with total parenteral nutrition was also enforced for 10 days. An antegrade nephrostogram was performed 1 month after the above-mentioned treatment and it was found that the fistula was closed. Retrograde intrarenal surgery (RIRS) for the renal pelvis stone was successfully done. The nephrostomy catheter was removed subsequently after retrograde pyelography showed no fistula or extravasation. There was no recurrence was detected in the 3rd-month follow-up.

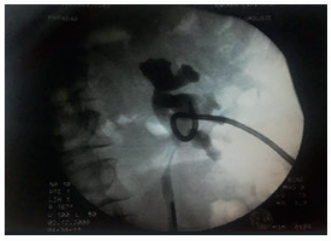
Figure 1A and B. Axial CT image of the left kidney stone (blue arrow: kidney stone) **(A)**, Incidentally diagnosed renogastric fistula on antegrade nephrostogram (left) and CT image (right) (red arrow: fistula tract, green arrow: nephrostomy catheter) **(B)**

A



B

Figure 2. Antegrade nephrostogram of the patient after conservative treatment



DISCUSSION

Reno-gastric fistulas are among the least common fistulas between the urinary and digestive tracts. Their rarity is likely due to the stomach's distance from the kidney and its separation from the retroperitoneal structures by the lesser omental bursa (4). The most common clinical signs found in cases of uroenteric fistulas are nausea-vomiting, lumbar pain, hematuria, pyuria, and fever (5). Cloudy and particulate drainage from a nephrostomy tube after a percutaneous procedure should prompt clinical suspicion of a fistula (6). Imaging with CT, intravenous pyelography, nephrostograms (especially in iatrogenic cases), upper gastrointestinal barium studies, and occasionally barium enema are appropriate for diagnosis and follow-up (7,8). Treatment depends on the underlying condition and renal function. In cases of a poorly functioning or nonfunctioning kidney, nephrectomy combined with repair of the affected bowel segment is the optimal approach. Conservative treatment involving drainage and bowel rest is preferred for patients with functioning kidneys. Using a large nephrostomy tube, with or without a ureteral stent, alongside bowel rest can lead to successful fistula closure (8,9). In conclusion, our patient's treatment was delayed due to the Covid-19 pandemic. The COVID-19 disease outbreak provided many reshaping lessons for all the world. Urologists should prioritize the patients in need of urgent care and inform the patients very well about treatment. Nevertheless, urological complications might be seen in this pandemic. This case underscores the importance of timely management of urolithiasis to avert rare, yet potentially severe complications like renogastric fistula. Incidentally, diagnosed reno-gastric fistula is a very rare disorder and can be managed conservatively if the kidney function is normal. Patient's Consent: Informed consent was obtained from the patient. Competıng Interest: The authors declared no competing interest. Authors' Contribution: ABB, VB, YG, ÇÖ, BCÖ: All the authors contributed to the concept, design, and drafting and approved the final version of the manuscript to be published

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