



Giant Fecaloma Leading to Bilateral Ureterohydronephrosis

CASE REPORT

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ABSTRACT

Symptomatic compression of the lower urinary tract because of constipation-induced fecal impactions is a rare condition. It is particularly seen in the elderly and in patients with limited mobilization and chronic dehydration caused by inadequate fluid intake. Among the reasons that can cause urinary tract obstruction, fecal impactions mimicking a pelvic mass effect should also be considered. In this study, we presented two cases of giant fecaloma leading to bilateral ureterohydronephrosis.

Keywords: Fecaloma, ureterohydronephrosis, constipation

INTRODUCTION

Constipation is a problem commonly observed in the elderly. Fecalomas resulting from prolonged constipation can cause various complications. This condition, also known as the terminal reservoir syndrome, is the accumulation of feces in rectum and sigmoid colon, and produces a mass by hardening (1-3). In particular, in elderly and neurological or traumatic sequelae patients, this condition is explained by mechanisms such as—primarily—movement restriction, decrease in fluid intake, and insufficient fibrous food intake (2, 3). Because of the local pressure effect of the occurring fecaloma, serious morbidities and mortalities, such as colon, bladder rupture, and urinary obstruction, can develop. Therefore, in accordance with the available literature, we aimed to evaluate our two patients, aged 73 and 63, who developed bilateral ureterohydronephrosis under the effect of fecaloma.

CASE REPORTS

CASE 1

When the 73-year-old female patient was in the orthopedics clinic, our clinic was consulted because of hematuria. In the patient's initial evaluation, it was learned that she had a history of hypertension, had undergone a total knee arthroplasty operation three months ago, and mobilization was severely restricted following that date. It was learned that approximately 1200 cc residual urine was emptied following the urethral foley catheterization and that hematuria began after this procedure. In her physical examination, abdominal distension was present, defense, rebound was not present and urethral foley catheter was present. Anal mucosal obstruction was detected via general surgery clinical examination. It was stated in the rectosigmoidoscopy report, which was conducted because of constipation, that since admittance, no process was performed due to bowel contamination. In the laboratory evaluation, hemoglobin was 9.5 gr/dL, white blood cells were 10,100/mm³, abundant erythrocytes in full urinalysis, urea was 39 mg/dL, creatinine was 0.64 mg/dL, and electrolyte values were normal. In her urinary ultrasonography, it was reported that bilateral grade 2 hydronephrosis was present, pelvicalyceal structures were bilaterally full in complete abdominal tomography, and both ureter iliacs were dilated until the diagonal (Figure 1, 2). Bilateral nephrostomy was performed on the patient due to creatinine values progressively increasing to the levels of 2.7 mg/dL and ureterohydronephrosis that remained bilateral. Patient was planned to undergo ureterorenoscopy but due to the deterioration of her general condition and bad oral intake, total parenteral nutrition was initiated. The patient was consulted to neurology clinic when she developed facial asymmetry in her follow-ups. In her anterograde pyelography and cystography, wide ureterohydronephrosis until bilateral iliac diagonal and an image of mass lesion pressurizing the bladder were observed. In her follow-ups, increases up to 89/3.5 mg/dL in urea and creatinine values were detected and she developed electrolyte imbalance. While she was being followed up in the neurology intensive care unit, patient was lost due to general deterioration and respiratory stress.

CASE 2

When the 63-year-old female patient was in the internal medicine clinic, our clinic was consulted because of hematuria. In the initial evaluation, it was learned that she had history of Progressive Muscular Dystrophia (PMD) and hypertension, her general condition was deteriorated, she was admitted to the emergency room because of stomach ache, and she was being followed-up by the internal medicine clinic after being admitted with the diagnosis of hyperka-

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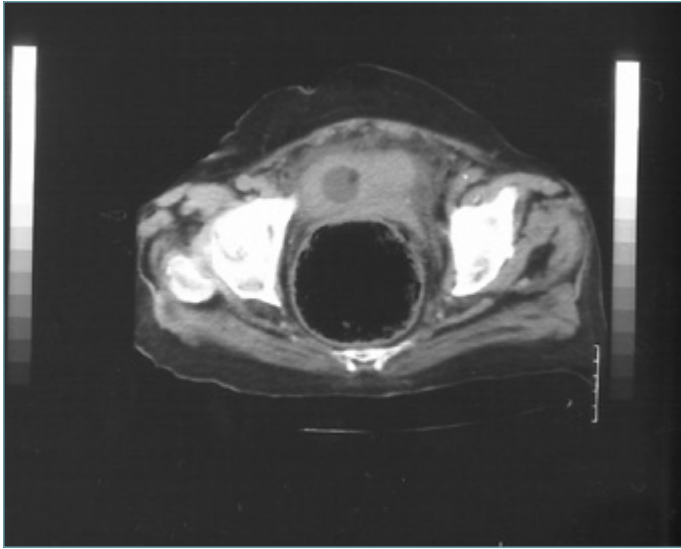


Figure 1. Rectum is seen as full with fecaloid

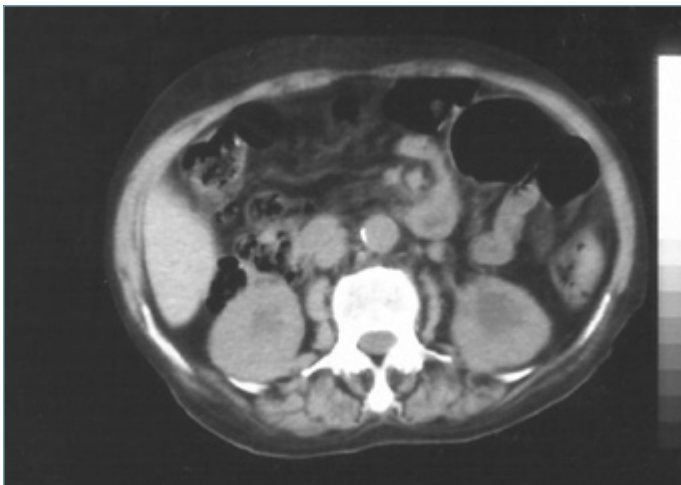


Figure 2. Bilateral hydronephrosis is observed in CT

lemia, metabolic acidosis, and ileus. Upon discovering that in the laboratory evaluation creatinine was 7.0 mg/dL, potassium was 7 mEq/L, blood PH was 6.9, hemodialysis was performed and in full abdominal ultrasonography, excessively distended abdomen, grade 2 increase in the bilateral renal parenchymal echo intensity, bilateral maximum 10 mm multiple calculi, and bilateral hydronephrosis were detected. In the abdominal tomography, bilateral multiple calculi were reported to be bilateral pelvicalyceal dilatation and dilated until both ureter distals, over-distended by rectum giant fecaloid, and pushed forward due to bladder mass and empty (Figure 3-5). Rectosigmoidoscopy could not be performed due to excessive contamination. The patient developed convulsions in her follow-ups and was evaluated by the neurology and neurosurgery clinics and subarachnoidal hemorrhage was detected. Patient was lost due to cardiac arrest that developed while she was being followed-up in intensive care unit.

DISCUSSION

Constipation and fecalomas that develop due to it are commonly observed in the elderly (1, 2). Many causes are suggested in its pathogenesis. There is a consensus that the most important mechanism is movement restriction. Other important reasons are as follows: insuf-

ficient fluid intake, dehydration, weakness in abdominal muscles, low intake of fibrous foods, diabetes mellitus, systemic endocrinopathies such as hypothyroidism, Parkinson's, multiple sclerosis dementia, cerebrovascular accidents, neuropathies such as spinal cord injury, and medicines that can cause constipation, such as diuretics, narcotic analgesics, calcium channel blockers, and iron salts (2, 4). We maintain that the knee arthroplasty operation in our first case and movement restriction caused by PMD in our second case are the most important etiological factors.

Fecalomas caused by prolonged constipation can cause even more serious morbidities. In literature, it has been reported that fecalomas can lead to complications such as ischemia, bowel perforation, peritonitis, rectal bleeding, hemorrhoid formation, and rectovaginal fistules (2, 3). Cases that affect the urinary system can be very rarely observed. Among these are bladder perforation, urinary infection, pyelonephritis, and as observed in both of our cases, unilateral or bilateral ureterohydronephrosis and renal failure that is caused by this (5-8). In their study, McWilliams et al. (5) presented a 74-year-old female patient who had a cerebrovascular accident and was admitted due to the mass filling the bottom left quadrant. Upon tests that were performed after the patient developed pelvic mass leading to hydronephrosis and renal failure, uterine leiomyoma or other tumoral formations were initially considered but they detected fecaloid in the rectal examination. After emptying the fecaloma via finger aid and enema, they stated that diuresis has started, and thus, hydronephrosis and creatinine values decreased. Similarly, in our first patient, uterine or ovarian tumoral mass and bilateral hydronephrosis initially caused by tumoral mass were considered. Again in examinations, giant fecaloma that completely filled the pelvis was discovered. But dissimilarly, defecation via finger or enema was unsuccessful. We maintain that the most important reason for this is the accompanying anal mucosal obstruction in the patient. No such case was hitherto encountered in the literature.

Knobel et al. (4) also presented an 81-year-old female patient due to the development of giant fecaloma and bilateral hydronephrosis leading from this. It is reported that hydronephrosis was present in this patient but urea and creatinine values were within normal range. They reported that urinary infection leading to fever, sigmoid colon diverticula, and cystocele accompanied the patient's clinical picture.

One of the reasons of constipation and fecaloma leading from this is endocrinopathies. In a study conducted by Yuan et al. (9) an 85-year-old patient that developed fecaloma leading to bilateral hydronephrosis is presented. It was demonstrated that ureteral and urethral obstruction occurred together. As we stated in the conclusion of this case report, it is emphasized that fecalomas should be considered, albeit rarely, among the causes of urinary obstructions.

Claffey et al. (10) presented a case in which the rare cause of barium accumulation caused fecaloma leading to bilateral hydronephrosis. It was stated that barium that was administered to the 71-year-old patient to evaluate upper gastrointestinal system, accumulated in the sigmoid colon and formed fecaloma and that obstruction can be removed by emptying the rectum via finger aid as a treatment.

Another reason for prolonged constipation, as was the condition in our second case, is underlying myotonic disorders. In a study presented in 1992, Brunner et al. (11) emphasized that in 4 different cases, myotonic disorder leading to intestinal pseudoobstruction has a serious morbidity to the extent that it may require surgical intervention and that conservative treatments should be considered first. In their

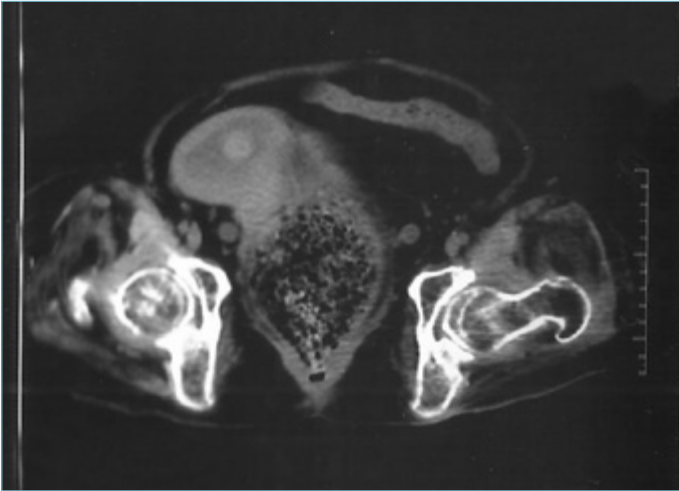


Figure 3. Rectum appears distended with giant fecaloid



Figure 4. Kidneys appear exceedingly dilated

2004 study, Uzunköy et al. (12) emphasized that myotonic dystrophy leading to the development of ileus picture was treated with two different surgical interventions and that along with mechanical reasons, myotonic dystrophies should be considered as an etiological factor. Similarly we maintain that in our second case, the present myotonic disorder caused the formation of giant fecaloma both by restricting the movement and by the pseudoobstruction that it formed, and that this lead to bladder pressure, causing ureterohydronephrosis.

As stated in this and similar studies, it is essential to empty the rectum with finger aid and to perform enema and suppositories. Removing the underlying cause and dietary modifications are also very effective (2). In our patient, the attempts to empty the rectum via enema and finger aid were insufficient because of accompanying anal mucosal obstruction. We maintain that this is the distinguishing feature of our case.

CONCLUSION

In conclusion, fecalomas leading to pelvic mass effect must be considered, albeit rarely, among the causes of urinary system obstruction. Preventing prolonged constipation is of vital importance, especially in elderly patients, patients with restricted mobilization, and with insufficient fluid intake. Therefore, dietary modifications, such as increasing

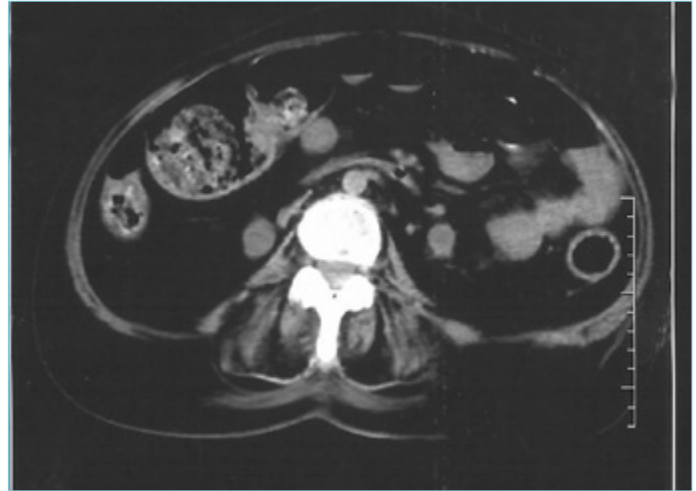


Figure 5. Both ureters demonstrate advanced dilatation

the intake of fibrous foods and taking more fluids as prophylaxis in such patients, are quite important in preventing obstructive gastrointestinal events and urinary system complications secondary to this.

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