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Case Report

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A Case of Urinary Retention in an Adolescent Female

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Case Presentation

A 15-year-old female presented to our emergency department with complaints of anuria for over 24 hours. She also had diffuse non-radiating abdominal pain, abdominal distention, and increased frequency of stools for the last 4 days. The patient had an unremarkable past medical history and reported no medication use. At presentation, she was afebrile, with a heart rate of 90 beats per minute, respiratory rate of 15 per minute, blood pressure of 118/82 mm of Hg, and saturation of 99% on room air. Physical examination revealed a distended abdomen with tenderness over the lower quadrants, with no guarding or rigidity. A hard mass was palpable in the lower quadrant of the abdomen and bowel sounds were normal. The genito-urinary examination was normal. Straight urethral catheterization resulted in 300 ml of amber-coloured urine. She had no laboratory abnormalities with normal renal function and a creatinine of 0.6 mg/dl. Computerized tomography (CT) of the abdomen and pelvis with contrast is shown in Figures 1 and 2. The CT revealed marked dilation of the sigmoid colon, measuring over 13 cm with a large amount of fecal matter. The urinary bladder was compressed and displaced laterally to the right, and no hydronephrosis was noted.

Figure 1: CT Scan of the Abdomen and Pelvis, Coronal View CT Showing Marked Dilation of the Sigmoid Colon (Blue Arrow) Measuring Over 13 cm with Large Amounts of Fecal Matter. The Urinary Bladder was Compressed and Displaced Laterally to the Right (Red Arrow)

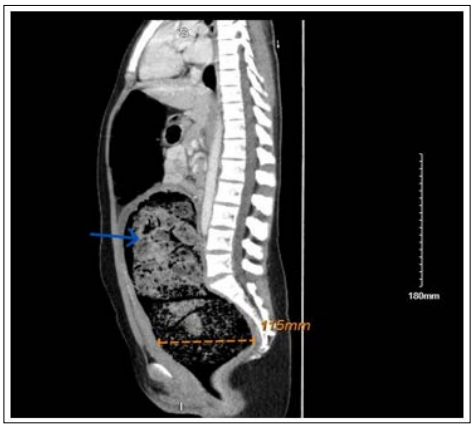

Figure 2: CT Scan of the Abdomen and Pelvis, Sagittal View CT Showing Marked Dilation of the Sigmoid Colon (Blue Arrow) Measuring Over 11 cm with Large Amounts of Fecal Matter

The patient was admitted to our inpatient unit and managed in collaboration with the gastroenterology service. She was treated with enemas and oral laxatives to aid the dis-impaction. No manual disimpaction was required. Straight catheterization was done every 6 hours to aid voiding during hospital day 1 after which the patient was able to self-void. The patient was discharged home after one week.

Urinary retention and constipation are known to occur together however, there have been few reports of massive colonic dilation leading to urinary retention [1]. Constipation with colonic dilatation is uncommon in healthy children [2]. Although the patient had no history of constipation, or motility disorders, retained fecal matter was seen in her massively dilated colon. While there is limited literature on the management of such extensive colonic dilation in the setting of constipation, the treatment of impacted feces is through pharmacological or manual dis-impaction of the fecal matter [3]. With our patient, the family preferred not to have manual dis-impaction and preferred a two-hour regimen of oral laxatives and rectal enemas. The abdominal pain, distension, and tenderness would be explained by the massive colonic dilation. Spurious diarrhea from impacted stools would explain the loose and increased frequency of stooling. Other differentials to consider

during the evaluation of acute urinary retention in an adolescent female include

- Obstructive causes such as pelvic masses, organ prolapse, urethral strictures, and urethral stones
- Infectious causes such as vulvovaginitis, and cystitis
- Other causes such as urethral sphincter dysfunction or trauma.

The main teaching point of the case is to recognize impacted and retained fecal matter as one of the differentials in the management of urinary retention [4].

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Consent: Written informed consent was obtained from the patient's guardian for this clinical image.

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