

Therapeutic Relief of Sigmoidal Volvulus Under Fluoroscopy Supported by AXIOM Luminos TF with mobile Flat Detector (mFD)

John P. Harris, M.D., Charles E. Winn, M.D.
North Colorado Medical Center, Greeley, CO, USA



Dr. John Harris and his team at the AXIOM Luminos TF.



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Patient history

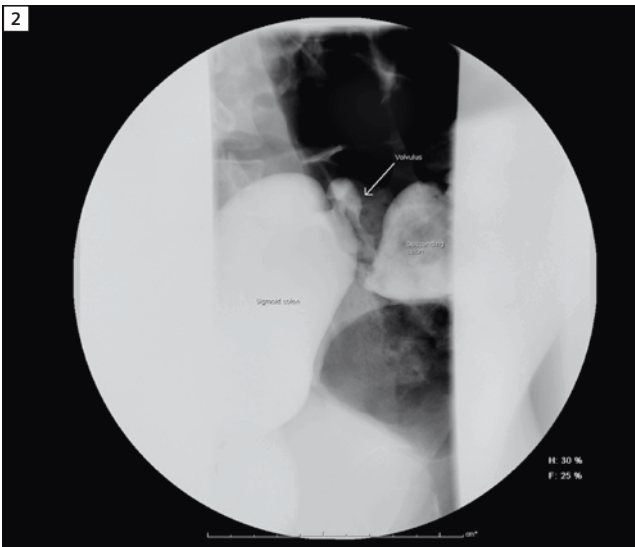
A 13-year-old female presented to the emergency department with sudden nausea, vomiting and abdominal pain. No history of surgery or injury given.

Diagnosis

The initial X-ray radiograph of the abdomen showed a large bowel ileus with some mild dilatation. The repeat radiograph and a subsequent CT scan two hours later confirmed a persistent, progressive air-filled distention to the sigmoid colon and the large bowel. As these findings are very suspicious for a volvulus of the sigmoid colon a gastrografenema was considered for further validation with the possibility of immediate therapeutic relief to ensure the blood flow to the intestine.

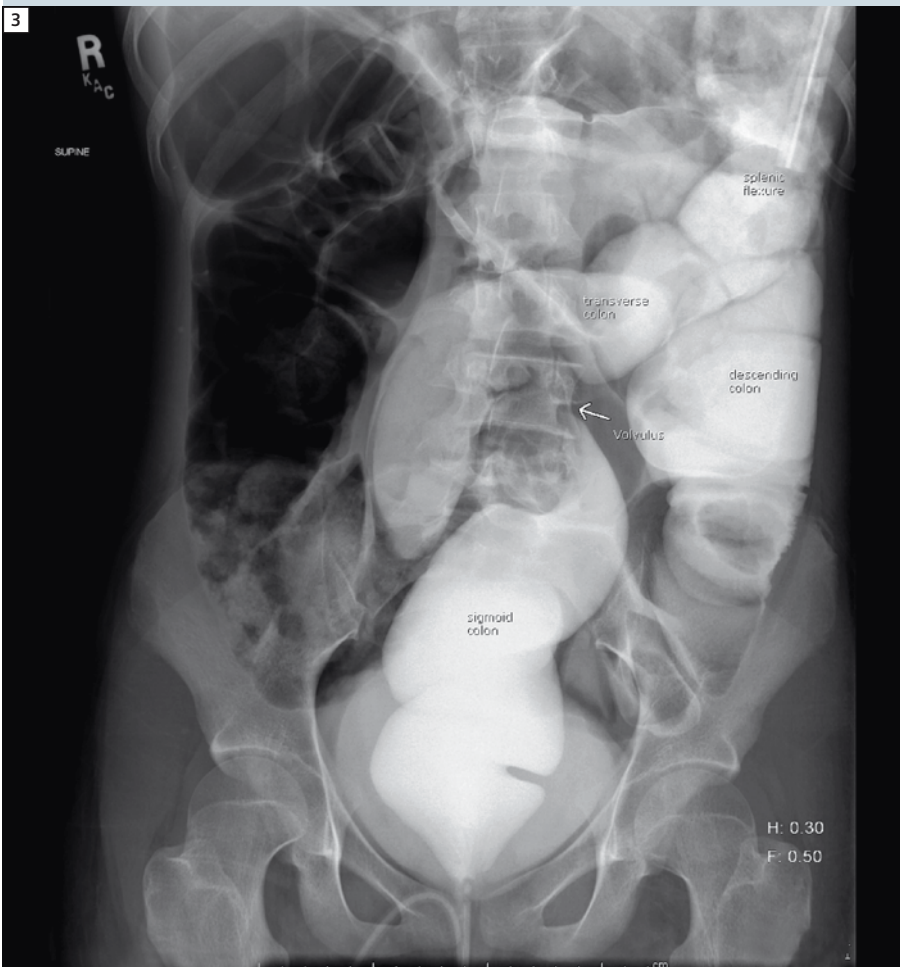


1 Delayed radiograph taken 10 min. after the therapeutic relief started.



2 Gastrografin enema validating the volvulus at the rectosigmoid junction.

3 Delayed radiograph approx. 20 min. after procedure started showing contrast passing into the descending and transverse colon.



Treatment

The treatment initially began in the SIMMs position where the patient is laying on the left side with the right knee brought up to the chest. The introduction of the contrast agent was conducted under fluoroscopy control. At the junction of the rectosigmoid, a volvulus could be verified. Very slight hydrostatic pressure was utilized before draining the contrast back. This procedure was repeated several times under fluoroscopy. Within about 20 minutes of starting this process, contrast was seen to enter the more proximal portion of the sigmoid colon and the patient began feeling relieved of symptoms.

An additional delayed radiograph showed contrast agent passing into the left and the transverse colon. The colon was of more normal caliber. The following delayed images indicated further evacuation. There was still some dilatation to the sigmoid colon but the patient showed considerable improvement in symptoms.

The patient was observed in the emergency department for an additional two hours and could be released with no residual pain or symptoms. A follow-up with abdominal imaging in three months time was recommended.

Comments

With the Siemens AXIOM Luminos TF fluoroscopy system and its mobile Flat Detector for digital radiographic imaging, the therapeutic relief of the volvulus and overhead delayed images could be completed within 23 minutes due to less processing time and well organized workflow. The radiographs acquired with the mobile flat detector were available within seconds and allowed the technologist to remain with the patient at all times. Patient care was perceived to be of higher quality.

Contact

kelly.obrien@siemens.com
barbara.reber@siemens.com