

Gastrografin meal and follow through treating a male with adhesive small bowel obstruction

*Moez S. Ballal, MBBS, Yasir S. Hadi, FRCSI
Mohammed E. Ahmed, MS FRCSI*

Adhesive small bowel obstruction (ASBO) is one of the simplest causes of intestinal obstruction and previous surgery remains the most common cause.¹ The use of gastrografin meal and follow through as a diagnostic and therapeutic measure after failure of conservative management and in the absence of indication of surgery of ASBO is still not widely practiced.² We report a case of ASBO that responded to gastrografin meal and follow through.

A 60-year-old male presented to the casualty with abdominal pain and absolute constipation for 3 days, abdominal distension and vomiting for 2 days. The pain was severe, colicky in nature, mainly on upper abdomen and was relieved by vomiting of greenish fluid. The patient gave a history of similar condition 3 years back that resolved spontaneously. The patient had a laparotomy for stab wound 15 years ago. Abdominal examination revealed tenderness on upper abdomen. Bowel sounds were exaggerated. Rectal examination was empty. Plain abdominal x-ray showed dilated loops of small bowel in supine film and multiple fluid levels on erect position. Abdominal ultrasound confirmed the distended bowel loops and excluded any mass. The serum amylase was normal. Conservative management in form of intravenous fluid therapy and nasogastric suction was adopted for 3 days after which the symptoms disappeared and the patient passed flatus and started oral feeding. On the next day symptoms recurred and the patient developed colic abdominal pain and distension and was put back on the same treatment. Gastrografin meal and follow through was carried out later on the same day when symptoms were getting severe. It showed a picture of partial small bowel obstruction with a narrow segment (**Figure 1**). The patient had an attack of diarrhea later on the day and all symptoms and signs resolved. He was discharged 3 days later and was symptom free until date (2 months later).

The role of gastrografin in ASBO has been evaluated recently. Gastrografin (Schering AG, Berlin, Germany) is a water soluble ionic bitter flavored contrast solution of an osmolarity of 1900 m/osm/L. It promotes shifting of fluids into the bowel lumen and increase the pressure gradient across an obstructed site. It also facilitates the passage of contents through the narrowed lumen and has the ability to decrease the edema of the bowel wall and enhances the bowel motility.^{3,4} Our

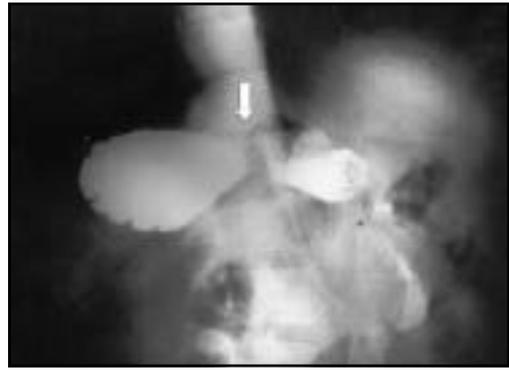


Figure 1 - Plain abdominal x-ray showed a partial small bowel obstruction with a narrow segment.

patient had ASBO due to adhesions from the previous laparotomy.¹ The decompressive effect of the initial conservative management lead to resolution of symptoms and signs by the third day. The narrowed segment shown later on the gastrografin meal and follow through is due to edema on top of the adhesions. This lead to relapse of symptoms and signs once the patient was started oral feeding. The attack of diarrhea which the patient experienced was mostly due to osmolarity effect of gastrografin in the bowel lumen.^{3,4} In case of perforation, gastrografin is relatively safe and has few side effects.⁵ The use of gastrografin in ASBO is safe, simple and may reduces the need for surgery when conservative treatment fails.²

Received 8th June 2003. Accepted for publication in final form 17th December 2003.

From the Department of Surgery, Faculty of Medicine, University of Khartoum, Khartoum, Sudan. Address correspondence and reprint requests to Dr. Moez S. Ballal, Senior House Officer, c/o Prof. Mohammed E. Ahmed, Department of Surgery, Faculty of Medicine, University of Khartoum, PO Box 102, Sudan. Fax. +249 (11) 782663. E-mail: rasheid@usa.net

References

1. Perry JF, Smith GA, Yoehiro EG. Intestinal obstruction caused by adhesions; review of 388 cases. *Ann Surg* 1995; 142: 810-816.
2. Choi HK, Chu KW, Law WL. Therapeutic value of gastrografin in adhesive small bowel obstruction after unsuccessful conservative treatment: a prospective randomized trial. *Ann Surg* 2002; 236: 1-6.
3. Chen SC, Lin FY, Lee PH, Yu SC, Wang SM, Chang KJ. Water soluble contrast study predicts the need of early surgery in adhesive small bowel obstruction. *Br J Surg* 1998; 85: 1692-1694.
4. Assalia A, Schein M, Kopelman D, Hirshberg A, Hashmonai M. Therapeutic effect of oral Gastrografin in adhesive, partial small bowel obstruction: a prospective randomized trial. *Surgery* 1994; 1154: 433-437.
5. Skuas J. Anaphylactoid reactions with Gastrointestinal contrast media. *AJR Am J Roentgenol* 1997; 168: 962-964.