SST has a number of effects on the GI tract including inhibition of gastric acid secretion, pancreatic secretion and biliary secretion. It also reduces gastric mucosal blood flow, gastric perfusion and stimulates mucus production. Octreotide has a similar secretory effect but it is unknown whether it elicits the same effect on the mucosa or blood flow.

The meta-analysis covering 14 RCTs show good evidence for the use of SST in acutely bleeding peptic ulcer to reduce the risk of continued bleeding, and a trend for reducing the need for surgery. The pH study and doppler studies theoretically support its use, as SST is shown to increase gastric pH (and thus allow optimum platelet function and decrease fibrinolysis) and decrease arterial blood flow, though with no date re clinical correlation.

The two octreotide studies included in the meta-analysis have completely different conclusions—the blinded trial showing no effect on outcome, the non-blinded trial concluded that octreotide stopped PU bleed, decreased Tx requirements and need for surgery. The further non blinded RCT by Archimandritis concluded that octreotide is not superior to ranitidine.

There were no published studies on the use of terlipressin.

In conclusion, there is an evidence base for the use of SST in severe, acute, non variceal peptic ulcer bleeding, but not for other vasoconstrictors at present.

What is needed is a large study looking at the efficacy of SST in specific patient groups, defined by source of, and severity of bleeding (ie active/non bleeding visible vessel).

► CLINICAL BOTTOM LINE

SST should be considered in unwell patients who are likely to be bleeding secondary to PUD until definitive endoscopy, or in situations when endoscopy is contraindicated or unavailable. There is no definitive evidence for the length of time treatment should continue.

1 Imperiale *et al* Somatostatin or Octreotide compared with H2 antagonists and placebo in the management of acute non variceal upper. GI haemorrhage. *Annals of internal medicine* 1997;127(12):1062–71.

2 Archimandritis *et al* Ranitidine versus ranitidine plus octreotide in the treatment of acute non-variceal upper gastrointestinal bleeding: A prospective randomised study. *Current Medical and Research Opinion* 2000;16(No3):178–183.

3 Saruc *et al* Somatostatin infusion and hemodynamic changes in patients with non-variceal upper gastrointestinal bleeding: a pilot study. *Med Sci Monit* 2003;9(7):184–87.

4 Avgerinos *et al* Somatostatin inhibits gastric acid secretion more effectively than pantoprazole in patients with peptic ulcer bleeding: A prospective randomised, placebo controlled trial. *Scandinavian Journal of Gastroenterology* 2005;40:515–522.

Water soluble, small bowel follow through for adhesive small bowel obstruction

Report by Usman Jaffer
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A short cut review was carried out to establish whether water soluble contrast small bowel follow through studies are useful in the management of patients with suspected adhesive small bowel obstruction (ASBO). In total, 152 papers were found using the reported search, of which 21 represented the best evidence to answer the clinical question. The clinical bottom line is that administration of oral contrast medium in patients with ASBO reduces the need for

operation, hastens resolution of obstruction, and reduces length of hospital stay. Oral water soluble contrast follow through studies should be performed in patients presenting with ASBO who are not obvious candidates for immediate operative treatment.

Clinical scenario

A 65 year old woman is brought into the emergency department following a 3 day history of nausea and vomiting, abdominal distension, and absolute constipation. Her vital signs are stable, and his abdomen is distended but not tender. A lower midline laparotomy scar from a previous hysterectomy is noted. A plain abdominal radiograph shows distended loops of small bowel with a paucity of air in the colon. A clinical diagnosis of ASBO is made. You wonder whether a water soluble contrast small bowel follow through (SBFT) study would be useful in the management of a patient with presumptive ASBO.

Three part question

In an [adult patient with previous abdominal surgery presenting with small bowel obstruction] is [water soluble contrast small bowel follow through] useful in [reducing need for operation, time to resolution, length of hospital stay and predicting those patients who will require operative treatment].

Search strategy

Medline 1950 to March 2006 using the Dialog Dastar interface: [small ADJ bowel ADJ obstruction] AND [water ADJ soluble ADJ contrast] OR [Contrast—Media#.DE. OR gastrografen] AND LG = EN

Outcome

In total, 152 papers were found, of which 21 were relevant to the topic.

ASBO, adhesive small bowel obstruction, NS, not significant. Level of evidence: level 1 denotes that a recent well-performed systematic review was considered or a study of high quality is available.

Comment(s)

Published literature strongly supports the use of water soluble contrast as a predictive test for non-operative resolution of adhesive small bowel obstruction. The evidence supports that amidotrizoate hastens resolution of small bowel obstruction and reduce length of hospital stay.

► CLINICAL BOTTOM LINE

Administration of oral contrast medium in patients with ASBO reduces the need for operation, hastens resolution of obstruction and reduces length of hospital stay. Oral water soluble contrast follow through studies should be performed in patients presenting with ASBO who are not obvious candidates for immediate operative treatment.

1 Kapoor S, Jain G, Sewkani A, *et al*. Prospective evaluation of oral gastrografen in postoperative small bowel obstruction. *J Surg Res* 2006;131:256–60.

2 Abbas S, Bissett IP, Parry BR. Oral water soluble contrast for the management of adhesive small bowel obstruction. *Cochrane Database Syst Rev* 2005; CD004651.

3 Burge J, Abbas SM, Roadley G, *et al*. Randomized controlled trial of Gastrografen in adhesive small bowel obstruction. *ANZ J Surg* 2005;75: 672–4.

4 Choi HK, Law WL, Ho JW, *et al*. Value of gastrografen in adhesive small bowel obstruction after unsuccessful conservative treatment: a prospective evaluation. *World J Gastroenterol* 2005;11:3742–5.

5 Yagci G, Kaymakcioglu N, Can MF, *et al*. Comparison of Urografen versus standard therapy in postoperative small bowel obstruction. *J Invest Surg* 2005;18:315–20.

Table

Author, date and country	Patient group	Study type (level of evidence)	Outcomes	Key results	Study weaknesses
Kapoor <i>et al.</i> ¹ 2006 India	24 patients with partial ASBO failing 48 hours of conservative treatment given amidotrizoate (Gastrografin)	Observational	Passage of amidotrizoate to caecum within 24 h. Resolution of ASBO	amidotrizoate reaches caecum within 24 hours in 22 patients (91.3%) all of which improved with continued conservative management.	No control group
Abbas <i>et al.</i> ² 2005 New Zealand	8 trials of patients with ASBO receiving oral water soluble contrast	Systematic review and meta-analysis	Ability of a water soluble contrast study to predict the need for surgery in ASBO The rate of resolution of ASBO without surgery in patients receiving oral water soluble contrast compared with those not receiving it Length of hospital stay, time from admission to resolution, time from admission to surgical intervention, mortality, small bowel strangulation, bowel resection, septic complications, shock, and extra-abdominal complications	Contrast in the caecum within 24 hours predicts resolution of an adhesive small bowel obstruction. Pooled sensitivity of 0.96, specificity of 0.96, positive and negative likelihood ratios 25 and 0.03 respectively Water soluble contrast did not reduce the need for surgical intervention (odds ratio 1.29, $p = 0.36$; meta-analysis of 4 studies) Water soluble contrast reduced hospital stay compared with placebo (weighted mean difference = -2.58; $p = 0.004$; Meta-analysis of two studies). Other outcome measures NS.	No blinded trials of treatment available
Burge <i>et al.</i> ³ 2005 New Zealand	35 patients with ASBO. Excluding those who had surgery or other investigations. 18 received amidotrizoate, 17 in control group	Randomised double blind controlled trial	Time to flatus and bowel opening. Length of hospital stay. Complications	Earlier resolution of ASBO (12 v 21 h, $P = 0.009$). Reduction in median stay (3 v 4 days, $P = 0.03$)	Small numbers
Choi <i>et al.</i> ⁴ 2005 Hong Kong China	245 patient episodes of ASBO given amidotrizoate following 48 hours un-resolved	Cohort study	Passage of amidotrizoate into caecum. Resolution of ASBO. Operation rate		45 episodes of unresolved ASBO following 48 h of conservative therapy. 7 patients had complete obstruction and hence surgery. Partial obstruction seen in 37 patients of which 1 had surgery for persistent obstruction. Operative rate 10% overall. Numbers too small to reach statistical significance
Yagci <i>et al.</i> ⁵ 2005 Turkey	388 patient episodes of ASBO. 199 patients were given Urografin (amidotrizoate), 118 patients were in the control group	Controlled trial	Operation rate	For the amidotrizoate group, 11.6% had operation. Control group: 24.6% had surgery.	
Aulin <i>et al.</i> ⁶ 2005 France	126 patients with ASBO given ioxithalamate (Telebrix Gastro)	Cohort study	Passage of ioxithalamate to caecum within 8 h. Operation rate.	Contrast reached caecum within 24 hours in 113 cases of which 111 resolved with conservative measures. For contrast reaching caecum with 24 hours as predictor of success of conservative treatment, sensitivity 98%, specificity 100%, accuracy 98%	No control group
Roadley <i>et al.</i> ⁷ 2004 New Zealand	25 patients with ASBO given amidotrizoate on admission. 20 historical controls	Case control	Operation rate. Length of hospital stay	In 20 patients. contrast was seen to arrive in the large bowel at 4 h. All these recovered with non-operative management. amidotrizoate group had a mean hospital stay of 3.9 days v 5.6 days for control group (significant)	No randomisation
Choi <i>et al.</i> ⁸ 2002 Hong Kong China	139 patient episodes of ASBO. Patients with no clinical or radiological improvement in first 48 h randomised to surgery or amidotrizoate groups	Randomised controlled trial	Passage of amidotrizoate into caecum. Need for operation.	Of patients not improving at 48 h, 19 were randomised to receive amidotrizoate, 16 to surgery. 14 demonstrated to have partial obstruction, all resolved conservatively remaining 5 demonstrated to have complete obstruction and underwent laparotomy. amidotrizoate significantly reduced the need for surgery by 74%	Relatively small numbers in groups

Table Continued

Author, date and country	Patient group	Study type (level of evidence)	Outcomes	Key results	Study weaknesses
Blackmon <i>et al</i> , ⁹ 2000 USA	418 patients with clinically equivocal ASBO given amidotrizoate. Obvious surgical candidates excluded.	Observational	Incidence of amidotrizoate reaching caecum in 6 hours. Need for operation	Contrast reached the colon within 6 hours in 68% of patients, and 88% of these were successfully managed non-operatively. The positive predictive value (48%), negative predictive value (87%), sensitivity (64%) and specificity (78%). Contrast reached the colon within 24 h in 70% – all were successfully treated non-operatively.	Retrospective
Chen <i>et al</i> , ¹⁰ 1998 Taiwan	161 patients with ASBO without clinical evidence of strangulation or gangrene given amidotrizoate	Observational	Passage of contrast into caecum on abdominal x ray at 4, 8, 16, 24 hours post amidotrizoate. Need for operation	Contrast medium failed to reach the colon within 24 h in 49 patients (30 per cent). 47 of these had operations. Appearance of contrast in colon within 24 hours as indicator for non-operative treatment: Sensitivity 98%, specificity 100%, accuracy 99%, positive predictive value 100% and negative predictive value 96%	No control
Assalia <i>et al</i> , ¹¹ 1994 Israel	117 patient episodes of ASBO given amidotrizoate	Randomised controlled trial	Time to resolution of partial small bowel obstruction, need for operation, complications and hospital stay.	Mean time to first stool was 23.3 hours in the control group and 6.2 hours in the amidotrizoate group (significant). 21% of the control group required operation v 10% in the gastrografin group ($p = 0.12$). Mean hospital stay for the patients who responded to conservative treatment was 4.4 days for control group and 2.2 days amidotrizoate group.	No blinding
Stordahl <i>et al</i> , ¹² 1988 Norway	50 patients with possible ASBO given either oral amidotrizoate or Omnipaque	Randomised double blinded trial	Passage of contrast into caecum. Resolution of obstruction	23 patients out of 28 with small bowel obstruction due to peritoneal adhesions resolved with conservative measures with no significant difference between the two media	
Anderson & Humphrey, ¹³ 1997 USA	64 patients who presented clinically with ASBO. 23 received oral barium, 41 had plain abdominal radiography.	Randomised controlled trial	Time to resolution of the symptoms or operation, length of hospital stay.	No difference in proportions having operations. Barium contrast studies had a sensitivity of 100% for diagnosing complete obstruction v 82% for serial plain radiographs. Time to operation was 8.2 hours in the contrast group v 12.4 hours in the plain radiograph group (NS). Length of hospital stay similar.	Criteria for SBFT diagnosis of SBO unclear

6 Aulin A, Sales JP, Bachar S, *et al*. Telebrix Gastro in the management of adhesive small bowel obstruction. *Gastroenterol Clin Biol* 2005;**29**:501–4.

7 Roadley G, Cranshaw I, Young M, *et al*. Role of Gastrografin in assigning patients to a non-operative course in adhesive small bowel obstruction. *ANZ J Surg* 2004;**74**:830–2.

8 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.

9 Blackmon S, Lucius C, Wilson JP, *et al*. The use of water-soluble contrast in evaluating clinically equivocal small bowel obstruction. *Am Surg* 2000;**66**:238–42.

10 Chen SC, Lin FY, Lee PH, *et al*. Water-soluble contrast study predicts the need for early surgery in adhesive small bowel obstruction. *Br J Surg* 1998;**85**:1692–4.

11 Assalia A, Schein M, Kopelman D, *et al*. Therapeutic effect of oral Gastrografin in adhesive, partial small-bowel obstruction: a prospective randomized trial. *Surgery* 1994;**115**:433–7.

12 Stordahl A, Laerum F, Gjølberg T, *et al*. Water-soluble contrast media in radiography of small bowel obstruction. Comparison of ionic and non-ionic contrast media. *Acta Radiol* 1988;**29**:53–6.

13 Anderson CA, Humphrey WT. Contrast radiography in small bowel obstruction: a prospective, randomized trial. *Mil Med* 1997;**162**:749–52.

Sudden onset single floater symptom in one eye: is urgent dilated fundal examination by an ophthalmologist warranted?

Report by Jaheed Khan, *Clinical Research Fellow*
Checked by Genevieve Larkin

A shortcut review was carried out to establish whether patients with only symptom of a sudden onset uniocular floater warrant urgent referral to an ophthalmologist for specialist retinal examination to exclude retinal tears or detachment. Altogether 316 papers were found using the reported search, of which two presented the best evidence to answer the clinical question. The clinical bottom line is that patients who complain of a sudden onset single floater with no photopsia or change in visual acuity