**Gastrografin administration in the management of adhesional small bowel obstruction in adults as a contrast agent**

This protocol is to aid in the safe prescribing and use of gastrografin as a contrast media. This is needed if gastrografin is to be kept as stock on the ward. **Gastrografin should not be used as a laxative.**

*Inclusion criteria: To be used in adult patients with suspected adhesional small bowel obstruction for use with Computerised tomography (CT) scan.*

*Exclusion criteria: Gastrografin is contraindicated in patients who have an iodine allergy, hyperthyroidism, have had surgery within 6 weeks of presentation or have complicated bowel obstruction (closed loop, bowel ischemia, necrosis or perforation). This guideline does not cover gastrografin use in paediatric patients (<10 years) or pregnant/lactating women.*

One ml of Gastrografin contains sodium diatrizoate 100mg and meglumine diatrizoate 660mg. It draws water into the bowel lumen, reduces bowel wall oedema and stimulates peristalsis. Side-effects are rare but are similar to those seen with intravenous contrast agents, most commonly: vomiting, nausea and diarrhoea. For full list of possible side effects see the BNF.

Adequate hydration and electrolyte balance should be established and maintained in the patients, since the hyperosmolarity of Gastrografin may cause dehydration and electrolyte imbalance.

When dilution is required:

Gastrografin must not be administered undiluted in patients with low plasma volume e.g. dehydrated patients, since hypovolemic complications can be particularly serious in these patients.

Gastrografin must not be administered undiluted in patients with suspected possibility of aspiration or broncho-oesophageal fistula, since hyperosmolarity may cause acute pulmonary oedema, chemical pneumonia, respiratory collapse and death.

Older (>65 years) and cachectic patients: Dilution with an equal volume of water is recommended.

If dilution is required: 0.5 - 1.5 litres of approximately 3% Gastrografin solution (30 ml Gastrografin/1 litre of water). If this volume is unlikely to be tolerated by the patient discuss with the surgical consultant on duty.

**Gastrografin Administration via NG tube:**

NG tube placed and aspirated to dryness (i.e. completely empty stomach). pH test of aspirated fluid prior to administration of gastrografin to confirm placement (pH target 1 – 5.5). Ensure head of bed is at a greater than 30 degree angle.

Clinical and radiological (Abdominal X-ray (AXR) and/or CT with contrast) findings consistent with adhesional SBO

NGT (nasogastric tube) left on free drainage for 2-4 hours and then aspirated to dryness

Administer 60ml - 100 ml (for follow through examination of GI tract) of gastrografin (diluted or undiluted as appropriate) via NGT and spigot for 2- 4 hours. NGT can then return to free drainage.

* Spigot NGT and commence free fluids
* Aspirate NGT after 4-6 hours. If aspirate < oral intake them remove NGT and build up diet
* NGT on free drainage with 4 hourly aspirations.

No contrast seen in colon on AXR

Contrast seen in colon on AXR or patient passes flatus/stool

Perform plain film AXR 6 – 8 hours after gastrografin administration.