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## **ACUTE COLONIC PSEUDO OBSTRUCTION MANAGEMENT**

### **Protocol:**

In response to recent events regarding the management of acute colonic pseudo-obstruction (also known as Ogilvie's syndrome) this report has been prepared to serve as a treatment guide in University Hospital. It is recognized that care must be tailored in each circumstance, but these recommendations should serve as a sound basis from which to start. As acute colonic pseudo-obstruction is not particularly common, precise data needed to answer specific questions is not always available. The following guidelines are derived from data and recommendations from the medical and surgical literature, and reflect resources available at University Hospital.

#### Prevention:

It may not be possible to prevent acute colonic pseudo-obstruction, however regular attention to bowel habits and avoidance of constipation may help. Patients should not be over-sedated and activity should be encouraged commensurate with their underlying medical/surgical condition. Careful attention to electrolyte and acid/base abnormalities is important too. The majority of cases occur after open-heart or major orthopedic surgeries. In these settings, clinicians should be particularly careful about bowel regimens and attentive to the possibility of acute colonic pseudo-obstruction.

#### Diagnosis:

The first step is to recognize the syndrome. Onset may be insidious or rather dramatic. It is often a post-operative complication, but can be seen after multiple traumas or in the seriously ill. Most experts believe that the colon must be dilated to greater than 9 cm as seen on simple abdominal flat plates. Data suggests that 12 cm or greater dilations are necessary for serious sequelae. Free air indicates a perforation and generally requires immediate consideration or operative exploration. The specifics of operative intervention lie beyond the scope of this report. If the small bowel is involved, then the diagnosis is not acute colonic pseudo-obstruction. Air should be seen in the rectosigmoid region of the colon. If it is not, consideration should be made of mechanical bowel obstruction. There are experts who support the use of **Cystografin** enemas to make the diagnosis of acute colonic pseudo-obstruction (by ruling out mechanical obstruction) and to treat it via decompression. This product is not available at University Hospital. **Gastrografin** enemas are recommended when needed to ascertain the presence or absence of mechanical obstruction. There is no data from randomized trials supporting the use of a particular type of enema over another in the management of acute colonic pseudo-obstruction.

### **Procedure:**

#### Management:

Initial management should include the recognition and confirmation of the syndrome. Subsequent care is divided into four phases. They are the conservative, pharmacologic, endoscopic, and surgical phases.

#### *Conservative Therapy:*

The conservative management phase should begin immediately upon diagnosis of acute colonic pseudo-obstruction. Specifically this means that steps should be taken if the colon is dilated to greater than 9 cm. A nasogastric tube should be placed and low-pressure suction applied. The patient should be placed on a strict NPO status. All narcotic and anti-cholinergic drugs should be stopped. All electrolyte and acid/base disorders should be corrected promptly, and euglycemia should be established. Some experts also advise frequent repositioning. Turning the patient every two hours may be tried, but there is no data to support

this. Purgative enemas may also be employed, but some authors feel they are likely to be more harmful than helpful. These patients need close observation. A serious consideration should be made as to whether the patient should be moved from a floor bed to a higher level of care if Nursing resources are limited. Vital signs should be checked frequently and the patient's abdominal examination must be carefully repeated. We suggest that the primary service of record repeat the examination at least every four hours and note the findings in the medical record. If the primary service of record feels they cannot manage the patient, consideration of a transfer of service should be undertaken.

There is little scientific data regarding the absolute timing of advancing to the next phase of therapy. A recent study in the Archives of Surgery looked at the course of 34 patients with acute colonic pseudo-obstruction and found that the time from diagnosis to death or resolution was 6.6+5.1 days. Data from a metaanalysis published in 1986 reported 15% mortality rate if successful decompression occurred in less than 4 days, 27% in the range of 4 to 7 days, and 73% after more than 7 days in 104 patients. The consensus from several sources would suggest that conservative therapy that fails to bring resolution (or at least improvement) within 48 to 72 hours should be supplemented. More recent commentary suggests therapy should become more aggressive if conservative measures have not worked in 24 hours. Abdominal x-rays should be obtained at least daily throughout the course of the illness, unless a change in clinical findings mandates more frequent studies. Improvement is suggested by reduction in the colonic dilation as seen on abdominal x-rays. Resolution means that the patient is moving his/her bowels and passing flatus. The abdominal x-rays show the colon is less than 9 cm in diameter, and the abdominal examination has returned to normal/baseline.

#### *Pharmacologic Therapy:*

The next phase is pharmacologic therapy. Neostigmine 2 mg should be given via IVP over 3 to 5 minutes in an intravenous line infusing normal saline. The patient should be on a cardiac monitor and a physician should be in attendance during the infusion and for 20 minutes after the infusion is completed. Oropharyngeal suctioning must be readily available to handle the excess secretions that will occur. Atropine 1 mg in a prefilled syringe must be immediately available to handle symptomatic bradycardia. If abdominal cramping occurs, the patient should not receive narcotic analgesia. Results should occur within five minutes with this regimen according to the authors who studied it. Recurrence is highly likely if underlying electrolyte abnormalities are not corrected or narcotics are continued. A repeat dose may be considered in 2 hours. An alternative dosing schedule involving the slow infusion of 2.5 mg of neostigmine in 100 ml of saline over 1 hour has been used.

Onset of response may be delayed up to 70 minutes with this regimen. Patients with peritonitis, recent myocardial infarction, active beta-blocker use, and significant bronchospastic disease may not be candidates for this therapy.

Serious consideration should be given to the setting in which this therapy is delivered. Nursing resources and equipment availability may require transfer to a monitored setting.

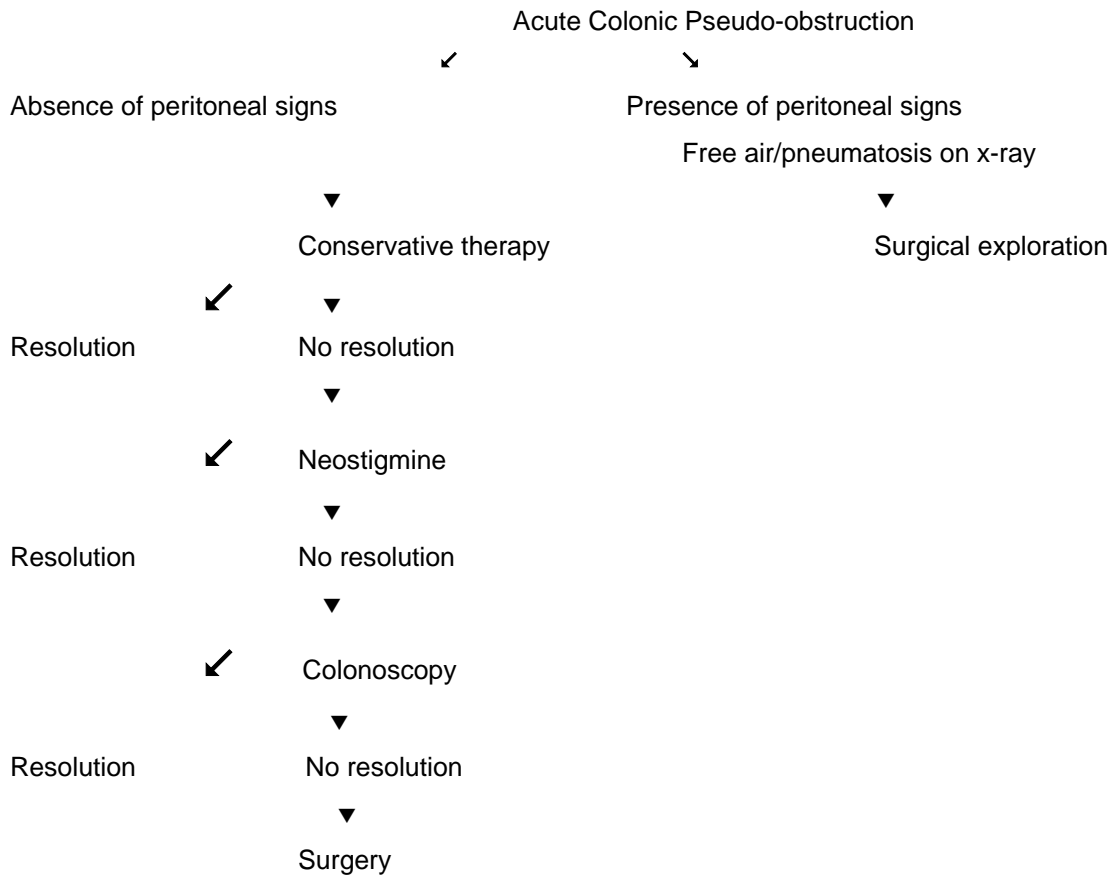
#### *Endoscopic Therapy:*

Endoscopic therapy via decompressive colonoscopy is next considered. Unless there is placement of a decompression tube, failure rates are high (40%). Some experts believe this should be tried initially if the colonic distension is greater than 13 cm. Neostigmine should probably be considered first unless there are contraindications. As patients are not prepped adequately, colonoscopy can be technically difficult process. Furthermore, dilation will reoccur if the underlying causes are not mitigated.

#### *Surgical Therapy:*

If these measures fail, peritonitis is discovered on clinical examination, colonic ischemia is noted on colonoscopy or pneumatosis and/or free air is seen on abdominal x-rays, laparotomy is indicated in the management of this syndrome. Cecostomy, partial colectomy, or subtotal colectomy may be necessary. Morbidity and mortality rates are high under these circumstances, but generally relate to the underlying condition of the patient.

Suggested Treatment Algorithm:



Modified from Tenofsky, et al Arch Surg 2000

**Originating Department:** Risk Management

**Contributing Department(s):** CQI Committee

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