

Case Report

Chronic Colonic Pseudo-obstruction with Micro-perforation in a Psychiatric Patient

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ABSTRACT

Colonic pseudo-obstruction, both in its acute and chronic forms, usually occurs in association with organic disease. Occasionally, this entity has been described in patients with underlying psychiatric illness. We describe a 53-year-old man with schizophrenia who presented with chronic pseudo-obstruction of the colon with megacolon,

complicated by perforation. This report is intended to increase the clinical awareness of the association between psychiatric illness and colonic pseudo-obstruction, so that this condition could be recognized early and unwanted complications avoided.

KEYWORDS: colonic pseudo-obstruction, megacolon, schizophrenia

INTRODUCTION

Colonic pseudo-obstruction, also known as Ogilvie's syndrome, is described as a constellation of symptoms and signs of large bowel obstruction, without structural obstructive lesions in the colon. This syndrome can present both as an acute or chronic disorder. The chronic form has been reported in patients who are institutionalized and those with psychiatric and neurological disorders.

We report a case of a 53-year-old man with chronic schizophrenia who presented with pseudo-obstruction of the colon, which was complicated with colonic perforation. This report is intended to increase the clinical awareness of the association between psychiatric illness and colonic pseudo-obstruction, so that this condition could be recognized early and unwanted complications avoided.

CASE HISTORY

A 53-year old man presented with a two-week history of worsening lower abdominal pain. The pain was colicky in nature, of moderate severity and without specific radiation. There was abdominal distention and nausea but no vomiting. Review of the systems was unremarkable except for long standing constipation. His past medical history was significant for chronic schizophrenia diagnosed at the age of 20. There was also a history of chronic constipation and megacolon since the age of 30 (Fig. 1). He required several hospital admissions for both of these conditions. He was

maintained on pemozide and benzotropine for 10 years but these were discontinued in December 2001 and trifluoperazine and boldolaxine were initiated. Two weeks prior to his current presentation, the patient developed acute muscle dystonia. Trifluoperazine and boldolaxine were discontinued and he was started on clozapine, procyclidine and cyprohepatadine.

Clinical examination revealed a middle-aged man who was chronically ill and cachectic. There was no pallor, jaundice, cervical or supraclavicular lymphadenopathy. There was a marked dryness of the oral mucosa and loss of skin turgor. His mental state examination showed evidence of decreased psychomotor activity but he was calm and cooperative with reasonable eye contact. He was unable to speak and it was difficult to do a complete mental state examination. Vital signs revealed a blood pressure of 105/60 mm Hg and pulse rate of 105 beats/min. Temperature was 37 °C and his respiratory rate was 35 breaths/min. Jugular venous pressure was not elevated. There was significant abdominal distention, moderate diffuse abdominal tenderness but no guarding or rigidity. No organomegaly was found and bowel sounds were absent. Rectal examination was normal and the rectal vault was empty. The remainder of the physical examination was within normal limits. Baseline investigations showed hemoglobin 129 g/L, white blood count 15×10^9 /L, platelets count of 230×10^9 /L, Glucose 6.2 mmol/L, Creatinine 43 mmol/L, Urea 10.1 mmo/L, Sodium

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Fig. 1: A plain X-ray of the abdomen done during one of the previous admissions showing a diffusely distended large bowel, impacted with fecal matter.



Fig. 2: A plain X-ray of the abdomen at the time of the present admission showing an air filled diffusely distended large bowel.

139 mmol/L, and Potassium 3.9 mmol/L. Liver enzymes, albumin, amylase and bilirubin were normal.

Electrocardiogram showed sinus tachycardia. Chest X-ray was normal. Plain abdominal X-rays showed marked colonic distension (Fig. 2). The patient was admitted to the intensive care unit for hemodynamic stabilization. Nasogastric and rectal tubes were inserted. All the psychotropic medications were discontinued. The patient's clinical condition continued to deteriorate with worsening of the abdominal pain and increase in abdominal distension. A repeat plain abdominal X-ray five days after admission showed an increase in the diameter of the colon and the presence of air under the diaphragm. Exploratory laparotomy was performed which showed a diffusely dilated colon, marked cecal distension with perforation and peritoneal soiling. A subtotal colectomy was performed with terminal ileostomy. The rectum was closed as a mucus fistula. The patient's post-operative course was uneventful.

DISCUSSION

The term "institutional colon" is used to describe an amotile and/or elongated and largely

distended colon in psychiatric patients who often live in mental health institutions, and may present repeatedly with symptoms of constipation, stool impaction, or Ogilvie's syndrome. Its seeming occurrence has been ascribed to the side effects of psychotropic medications, fiber-deficient diets or inattention to stool call^[1-3]. Apart from few case reports, its frequency of occurrence and associations with various neurological and psychiatric diseases has not been analyzed^[4-9].

Idiopathic constipation occurs in two forms. In the first type, the colon is of normal caliber and constipation is secondary to "colonic inertia". This form is a result of loss of intrinsic excitatory innervation through cholinergic neurons^[10]. The second type is a constipation associated with megacolon, whereby the large intestine and the rectum are dilated; this is primarily secondary to loss of intrinsic inhibitory innervation^[11,12]. A morphologic study carried out in patients with megacolon showed that there is a diminution of number of neurons as well as degenerative changes in the cell body of the neurons in the myenteric plexus^[13]. The coincidence of several neurological disease and psychiatric disease with colonic dysmotility may suggest that this is not a pure

coincidence, but there is a dysfunction which involves the brain, spinal cord and the enteric nervous system. Our patient had a long-standing history of psychiatric illness. During the course of his illness he was treated with different antipsychotic agents. For many years he had chronic constipation and eventually he developed a form of chronic colonic pseudo-obstruction with megacolon. Despite its known association with institutionalized patients, the diagnosis remains difficult and is often delayed.

Our patient was treated with trifluoperazine for six months, which was discontinued almost two weeks prior to his admission. Trifluoperazine is an antipsychotic medication, a member of the phenothiazine group. Phenothiazines have been linked to colonic pseudo-obstruction in psychotic patients^[14]. The exact mechanism of this type of medication in inducing this clinical entity is not known. It was postulated that these psychiatric patients who developed this condition might have had an underlying neuromuscular disease of the colon, and the phenothiazine group of medications exacerbated the problem^[14]. Similarly, procyclidine has been reported to cause paralytic ileus in a 77-year old patient with underlying Parkinson's disease^[15]. Sonnberg *et al* found that co-morbidity of colonic and neurological/ psychiatric disease in identical subjects occurred two to three times more often than one would expect from the overall distribution of each group of disease alone^[16]. Furthermore, while depressive disorders are associated with only constipation without other evidence of colonic disease, schizophrenia coincides mostly with megacolon and constipation. This latter observation has been ascribed to the side effects of anti-psychotic medications, fiber deficient diet and inattention to call for stool. In addition, presence of colonic dysmotility in these patients could be the result of damage to the extrinsic and intrinsic neurons controlling the intestinal motility. Khoury *et al*, in a review of 31 patients with sigmoid volvulus showed that almost 50% of patients had a history of mental illness and more than 30% had chronic constipation and abdominal distention^[17].

This case underscores several important points. First, chronic constipation and megacolon is not an uncommon finding in psychiatric and

institutionalized patients. Second, abdominal distention in those patients should be taken with caution, and plain abdominal X-ray done to rule out colonic pseudo-obstruction. Third, perforation although rare, could result from delayed and prolonged colonic distension in patients with colonic pseudo-obstruction.

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