CASE REPORT

OGILVIE SYNDROME WITH CECAL PERFORATION AFTER CAESAREAN SECTION

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ABSTRACT

Ogilvie syndrome (OS) or acute colonic pseudo-obstruction (ACPO) is a condition characterized by clinical and radiological features of colonic obstruction in the absence of any mechanical cause. Colonic pseudo-obstruction after a C-section is uncommon and perforation of cecum in such a case is rare. We present a case of a patient presenting with abdominal pain and distension after Caesarean section with the operative findings of perforation of cecum. Patient was managed with an open cecostomy that required an open closure after three months. Open cecostomy is an option when the defect in cecum is large after excision of its gangrenous part.

Keywords:

Acute colonic pseudo-obstruction; Caesarean section; Cecal perforation; Ogilvie syndrome; Open cecostomy

INTRODUCTION

Ogilvie syndrome was first described in the medical literature in 1948 by a British surgeon named Sir William Ogilvie.[1] This disorder is also known as acute colonic pseudo-obstruction. It is distinct from chronic intestinal pseudo-obstruction, a similar disorder with different presentation. Ogilvie Syndrome (OS) is a rare acquired clinical condition which is characterized by massive dilatation of the colon associated with abdominal pain and distension but without any evidence of mechanical obstruction.[1] The causes are multifactorial with the most common being trauma, recent surgery (abdominal, urologic, gynecologic, orthopedic, cardiac, or neurologic), serious infection, cardiac disease, electrolyte imbalances, medications, severe constipation and hypothyroidism.[2] The exact cause of the disease remains unclear to date but most theories suggest an imbalance of a decreased parasympathetic and increased sympathetic tone or a combination of both.[2] The patients most commonly present with abdominal pain, distension, nausea, vomiting and constipation. It usually develops over a few days but some may present with rapid deterioration over a period of 24 hours. An additional finding of fever and peritoneal signs is seen in patients with ischemic or perforated bowel. Physical findings mostly include abdominal distension, abdominal tenderness, absent or hyperactive bowel sounds and an empty rectum on digital rectal examination.[3]

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Here we present a case that developed Ogilvie syndrome a few days after caesarean section surgery. She presented with acute peritonitis because of rare complication of cecal perforation.

CASE REPORT

A 20 year old female with her third pregnancy, underwent an elective Caesarean section at 38 weeks of gestation, in a private hospital. She was discharged on second postoperative day. On third postoperative day she started developing abdominal distension. Two days after that she had an episode of vomiting and also complained of absolute constipation. One week after surgery, she was referred to our hospital with abdominal distension, absolute constipation and decreased urinary output for previous two days. There was no history of vomiting, nausea or fever. On examination, her pulse was 140 bpm, BP was 90/50 mmHg, temperature was 101°F and respiratory rate was 22/min. Examination showed a distended abdomen with mild generalized tenderness and absent bowel sounds. Digital rectal examination revealed an empty rectum. Her clinical signs and symptoms

pointed to a diagnosis of acute peritonitis.

The patient was placed nil per orum. Nasogastric tube was passed and it yielded copious aspirate. Only 50 ml of urine was obtained in Foley catheter. Aggressive fluid therapy and intravenous antibiotics were started. Chest X-ray showed massive pneumoperitoneum with blunting of costophrenic angles(Fig 1). Plain X-ray abdomen (Fig 2) showed dilatated ascending colon loaded with fecal material. Dilated cecum was seen displaced medially due to free peritoneal air. Laboratory investigations were within normal limits. Based on her history, examination findings and radiological signs, Ogilvie syndrome with perforation of cecum was suspected.

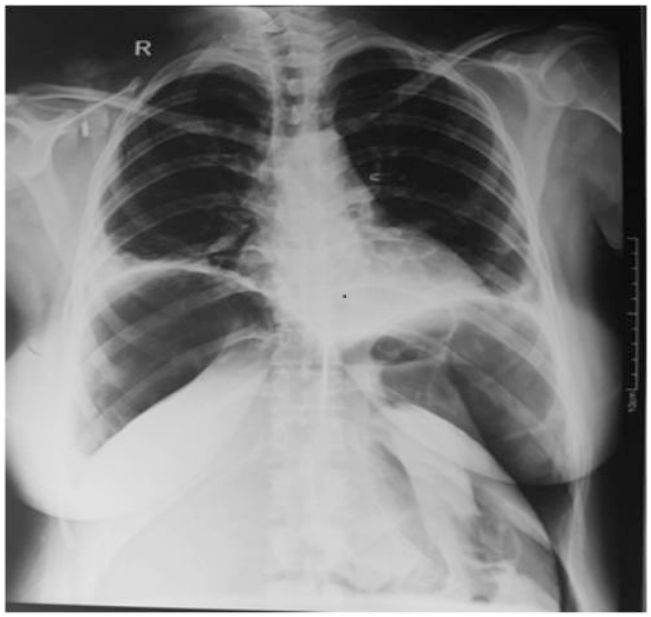

Figure 1: Chest x-ray PA view

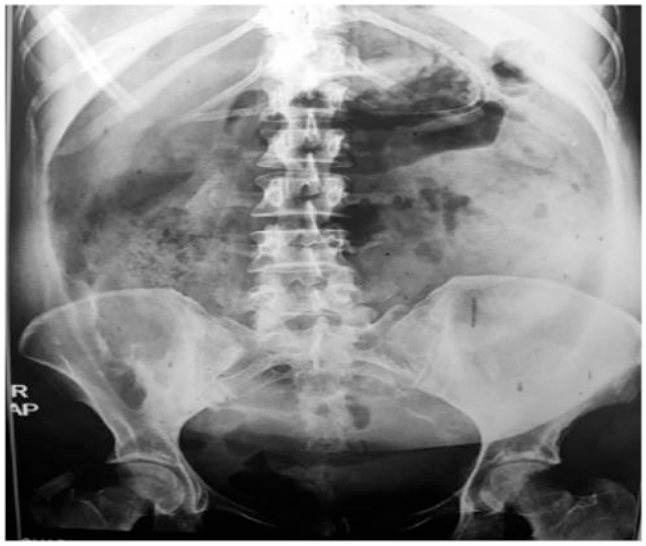

Figure 2: Plain x-ray abdomen showing dilated cecum

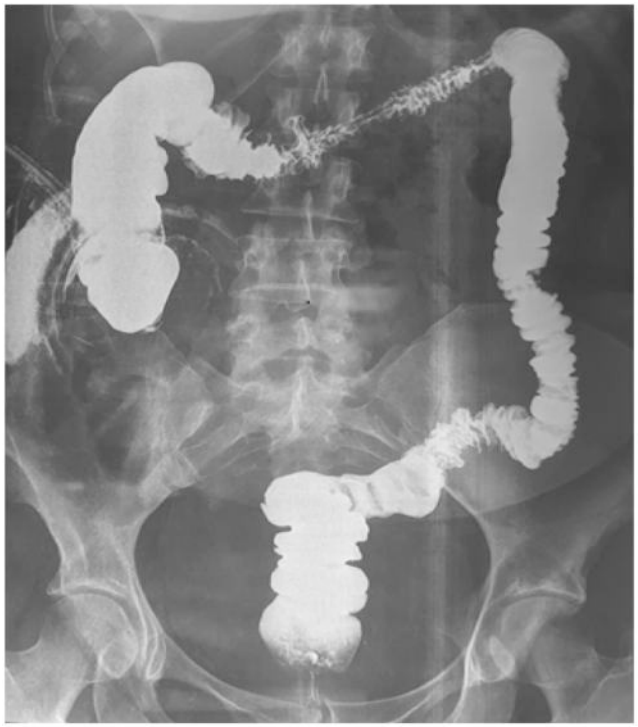

Figure 3: Distal barium loopogram before closure of cecostomy

An emergency exploratory laparotomy was carried out. There was generalized fecal peritoneal soiling. Cecum and ascending colon upto the hepatic flexure were found to be massively dilated. Cecal diameter was about 16 cms, with two 2.5 cm gangrenous and perforated patches on its anterior wall. Thorough peritoneal lavage was done with 0.9% saline. Necrotic patches were excised. This large defect in the cecum was not sutured because of intraperitoneal sepsis and instead it was brought out as a cecostomy. Post-operatively, the patient was nursed in ICU for 2 days and managed with intravenous fluids, antibiotics, analgesics and nutritional support. She was discharged on 5th post-operative day.

The cecostomy continued functioning and an open closure of cecostomy was performed after three months after confirming patency of distal bowel by a barium loopogram (Fig 3). Patient started passing stools on third postoperative day and was discharged on fifth postoperative day.

DISCUSSION

Ogilvie Syndrome (OS) or acute colonic pseudo-obstruction (ACPO) is the presence of colonic dilatation and features of intestinal obstruction in the absence of any mechanical cause. Mechanical obstruction usually refers to any lesion that physically blocks the passage in

the colon. The most probable cause of OS has been attributed to recent surgery, other causes being infection, trauma, electrolyte disturbances, cardiac disease and various medications.[2] The pathophysiology includes disturbances in the autonomic nervous system with the imbalance between parasympathetic and sympathetic systems mainly responsible for contributing to the etiology.[4]

Cecum is the most common site of perforation in OS because of its large diameter. In the presence of a functional ileocecal valve, the colonic contents cannot spill over into the ileum. Therefore, any increase in pressure in the large gut causes the cecum to dilate. According to Laplace's law, the intraluminal pressure required to stretch the wall is inversely proportional to the diameter. Because of its large diameter, cecum is more prone to ischemia and subsequent perforation.[5] Cecal perforation is the most serious complication of OS as its mortality rate can be up to 36- 44%.[6] Fortunately the incidence of cecal perforation is only 1% to 3%.[7] The diameter of cecum is an important parameter to assess the perforation. General consensus nowadays is that, a diameter of 9 to 12 cm should be managed conservatively. However, a cecal diameter of more than 12 cm is at a high risk of perforation, reported in up to 23% of patients.[4]

The diagnosis is based on history, clinical presentation and imaging. Laboratory investigations provide little information, particularly in a patient who has undergone surgery recently. Plain abdominal radiography may show dilatation of mainly the ascending colon that may extend up to splenic flexure. In the presence of perforation, air may be seen under the diaphragm. Air fluid levels may or may not be present. Contrast enemas can also be used if the diagnosis cannot be confirmed.[8] Colonoscopy can serve both as a diagnostic and therapeutic tool. It can differentiate ACPO from mechanical obstruction and relieves the pressure in the dilated bowel.[9]

Treatment depends upon the presence or absence of bowel ischemia and perforation. If there is no evidence of ischemia, and the cecal diameter is less than 12cm, conservative management should be tried. Bowel is rested, aggressive fluid therapy is started, nasogastric decompression is done, and any electrolyte imbalance is corrected. Intravenous antibiotics may be started as a prophylactic measure. The patient is closely monitored for any signs of peritonitis and serial radiographs are obtained to measure cecal diameter. Conservative management may be employed for 48 to 72 hours and successful resolution has been reported in 83-96 % of patients.[10]

Medical management with neostigmine has been reported to be very successful in recent studies.[10] It is a cholinesterase inhibitor and helps in increasing bowel motility. A dose of 2mg of diluted neostigmine may be given and repeated after 12 to 24 hours. Good outcome has been reported by some studies that were done using a sympathetic blocker, guanethedine, followed by a cholinesterase inhibitor, neostigmine.[11]

Endoscopic decompression has been reported to be superior to neostigmine therapy in recent studies.[12] A temporary decompression tube may be guided by the scope into proximal colon for continued decompression.

Percutaneous tube cecostomy is reserved for patients who do not respond to conservative means. Although criticized for complications like wound infection, cecal fistula, and intraperitoneal leakage, it remains an advantageous option as it successfully decompresses the large bowel and can be performed on the bedside in critically ill patients.[4,11]

Surgical intervention with an exploratory laparotomy should be done in a patient with signs of bowel ischemia and perforation. The surgery may entail a tube cecostomy, an open cecostomy, right hemicolectomy or proctocolectomy; depending upon the operative findings.[11] Surgery is also the last resort in those patients who have failed to respond to conservative therapy or colonoscopic decompression.

CONCLUSION

Ogilvie Syndrome (OS) must be suspected in unexplained abdominal distension in a postoperative case. Radiography is the best diagnostic tool. Colonoscopic decompression and medical management can be successful in most cases but repeated evaluation should be done for bowel ischemia and perforation. Surgical intervention is done in patients with signs of bowel ischemia and perforation. Open cecostomy is an option after removal of a gangrenous patch of cecum in severely sick patient.

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