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Case Report

The rare Ogilvie's syndrome during pregnancy with scrub typhus and dengue co-infection

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ABSTRACT

Ogilvie's syndrome is a syndrome characterized by symptoms suggestive of intestinal obstruction without any mechanical cause. Otherwise known as acute colonic pseudo-obstruction (ACPO). This condition is very uncommon, however it is very important to recognize it at the earliest, as it increases the risk of mortality and morbidity if left untreated. It is mostly seen post traumatic or post operative. Though commonly seen associated with post caesarean section, rarely seen during the period of pregnancy. The treatment is fundamentally conservative, but the need of surgical management has also been reported in severe cases. Here, we describe the rare Ogilvie's syndrome in young pregnant term female that continued to progress despite appropriate treatment.

Keywords: Ogilvie, Caesarean, Postpartum, Pregnancy, Surgery

INTRODUCTION

Ogilvie's syndrome or ACPO is a rare entity, that was first described by Sir Heneage Ogilvie in 1948, it corresponds to a distinct form of colonic dilatation usually involving caecum and ascending colon, without evidence of underlying mechanical or anatomic cause.[1] Abnormalities of the autonomic nervous system, characterized by sympathetic or parasympathetic dysfunction, or a combination of both, have been used to explain the etiology.[2] The therapeutic management is initially conservative. However surgical colonic decompression is required when the caecum is dilated >12 cm, or after the failure of conservative management as it increases the risk of ischaemia and perforation, which can be related to a mortality range of 40% to 50%.[3] Therefore, the early diagnosis and rapid treatment plays an important role in preventing the complications. Here, we report a rare case of Ogilvie syndrome at term gestation associated with underlying scrub typhus and dengue co infection that continued to have poor prognosis despite surgery.

CASE REPORT

A 24-year-old obese primigravida at 38 weeks and 1 day of gestation came with complaints of fever and dry cough and abdominal pain for one day and was admitted in Obstetrics ward, who is booked and immunized and no other significant complaints. She was febrile at the time of presentation. Her obstetric examination revealed she was not in labor and unfavorable cervix. All baseline investigations done and were within normal limits. Pyrexia was treated symptomatically. Growth scan revealed oligohydramnios with mild placental insufficiency. NST showed Fetal tachycardia despite intrauterine resuscitation. Decision for emergency LSCS was taken in view of oligohydramnios with unfavorable cervix with persistent fetal tachycardia. Patient delivered a healthy term baby with clear liquor. Intra operatively, bowel loops were found distended and edentulous with appendix remained unremarkable.

Counselling done for the resection and anastomosis of sigmoid colon with ileal stoma but patient attenders did not

consent for the same. Hence, colonic decompression done and flatus tube inserted, distension reduced and flatus tube was fixed in situ.

Post operatively, patient was stable except the febrile episodes. Fever panel revealed scrub typhus and dengue positive and started on oral Doxycycline 100 mg. On post-operative day 1, patient had multiple high grade febrile episodes, treated symptomatically. General physician advised to continue intravenous hydration and intravenous analgesia; platelet and hematocrit monitoring every 12th hourly. ECG showed sinus tachycardia of heart rate 135/min. Intravenous antibiotic (Piperacillin and tazobactam 4.5 gm) was started. On post operative day 2, patient complained of vomiting, treated with anti-emetics. Abdominal girth and other vital parameters monitored, intravenous hydration and intravenous antibiotics continued. Ryles tube drained 150 ml of bilious secretion and fever spike of 101° F noted, treated symptomatically.

On post-operative day 3, intravenous antibiotic vancomycin started as per general physician advice in view of intractable pyrexia with leukocytosis and increased CRP. Platelet and hematocrit were within normal limit. Abdominal girth found to be progressively increasing with shortness of breath. Due to worsening symptoms, after confirming the pathological distension of the colon in the radiological examination and due to lack of improvement with conservative treatment, she was taken up for exploratory laparotomy where small and large bowel found congested with multiple ecchymotic patches, peri-appendicular pus collection. Pus drained and appendicectomy done. Bowel and colon decompression with transverse colostomy was done.

Patient could not be weaned off from mechanical ventilator due to hemodynamic instability. On post operative day 1 of relaparotomy, patient developed deranged metabolic and renal parameters which was under correction and patient had developed hypotension for which she was started on inotropes.

CT pulmonary angiogram reported to have no evidence of thromboembolism with B/L mild pleural effusion (R>L). Patient had one episode of supraventricular tachycardia and reverted. Double inotropes started and intra-arterial line secured, continuous intra-arterial blood pressure was monitored. Persistent pyrexia of more than 104° F were noted.

On post operative day 2 of relaparotomy, patient deteriorated. Severe hypotension noted, triple inotropes started. Persistent ventricular tachycardia noted not responding to drugs and DC shock and patient went into sudden cardiac arrest. Resuscitation initiated as per ACLS guidelines, ECG showed asystole and despite resuscitative measures, patient declared dead on 2nd post operative day of relaparotomy with cause of death being sepsis with Ogilvie's syndrome.

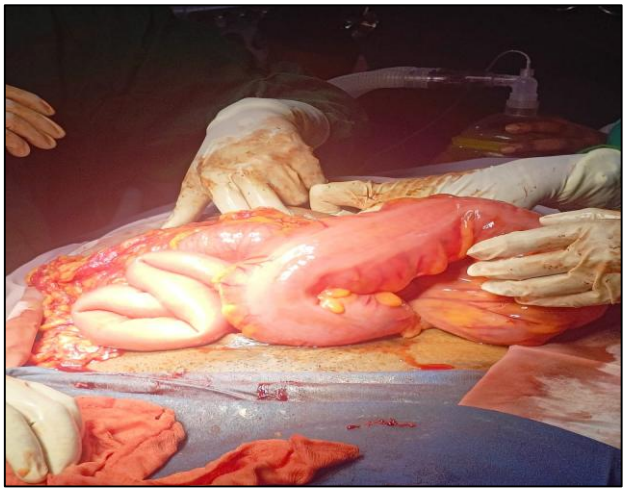

Figure 1: Intra op findings during C-section showing massive dilation of the descending colon and the small bowel.

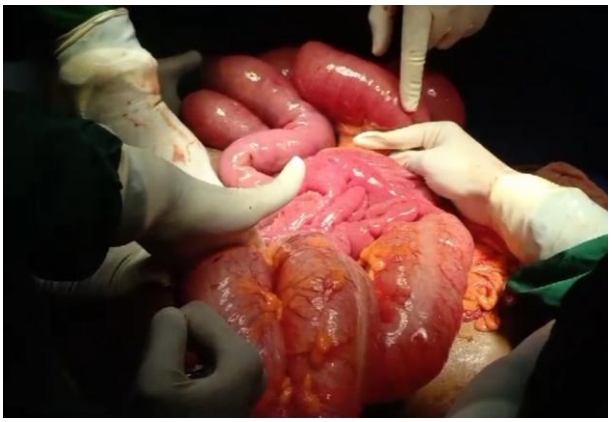

Figure 2: Intra op findings during relaparotomy, showing massive dilation of the ascending, transverse, descending colon, and the small bowel.

DISCUSSION

Ogilvie's syndrome is an uncommon clinical condition that typically arises following abdominal or pelvic surgery, or because of trauma. Among various surgical procedures, the caesarean section is the one most frequently linked to this syndrome. The etiology is still not well understood; however, it is suggested that an imbalance between sympathetic and parasympathetic nerve connections in the colon may create a functional barrier between the innervation regions of the colon. This is potentially aggravated by the gravid uterus, which may compress the sacral parasympathetic plexus supplying the colon which could lead to colon distension, increased pressure, and disruption of capillary blood flow, which in turn would result in parietal ischemia, tissue death, and ultimately perforation.

The cecum is particularly susceptible as it has the thinnest walls and the largest diameter among the parts of the colon. Nonetheless, the exact mechanism behind the syndrome

remains ambiguous, and it is believed to involve multiple factors.

The signs and symptoms frequently resemble those of a bowel obstruction, with meteorism and abdominal distension with vomiting being the most common presentation accompanied by hyperactive bowel sounds. It is commonly associated with constipation, nausea, vomiting, and fever. The primary differential diagnosis to consider is paralytic ileus. A key clinical indicator to differentiate is the absence of bowel sounds in paralytic ileus, whereas they are noticeably hyperactive in Ogilvie syndrome.

Symptoms are most often gradually established within the first 2 to 12 post-operative days. A clinical examination may reveal a tympanic, distended belly, mild to moderate pain, and hyperactive bowel sounds.

No distinct biological abnormalities are noted. Nonetheless, an unusual rise in white blood cells (leucocytosis) is observed in 27% of uncomplicated cases and in all patients with a caecal perforation. A plain abdominal X-ray is the most effective diagnostic tool for identifying this condition showing significant colon distension accompanied by air-fluid levels. However, in our case leucocytosis and massive dilatation of large bowel noted by CT imaging. It is a therapeutic emergency, and the goal of the treatment is to minimize the distension and avoid a further perforation. The therapeutic indication is based on the patient's overall health, the size of the caecum on imaging, and the presence or absence of perforation indications.

Medical conservative treatment includes a trial of bowel rest, insertion of a nasogastric tube, correction of electrolyte imbalances, early mobilisation, cessation of contributory medications (opiates, calcium channel blockers, anticholinergics).[4] It is necessary to continue conservative treatment for 48-72 hours, taking serial plain radiographs every 12-24 hours and conducting regular clinical reviews.[5]

Early initiation of the enhanced recovery after surgery (ERAS) program has also demonstrated a significant decrease in opioid use, both as an inpatient and an outpatient, is linked to an overall improvement in pain scores following caesarean sections thus reducing the risk variable of Ogilvie's syndrome such as opioid.[6]

If no improvement is shown, pharmacological decompression with neostigmine, which inhibits acetylcholinesterase to enhance colon motility, could be initiated. Endoscopic colonic decompression causes the caecal diameter to collapse through aspiration of air and colic stasis material. It is considered a safe and less invasive procedure, and it is the preferred treatment when there are no evidence of perforation or peritonitis. It is successful in 68% to 95% of cases, but recurrences are common.[7]

Surgery in the form of cecostomy, hemicolectomy with or without primary anastomosis, and resection of the ischemic or perforated segment of the intestine should be considered if pharmacological and endoscopic decompression failed or if there are signs and symptoms of perforation.

Although the prognosis for Ogilvie syndrome is good, the morbidity rate is significant, with ischemia or perforation occurring in 3 to 15% of cases and an associated mortality rate with an upper range of about 50%.[8]

Along with colonic ischemia and perforation, old age, a caecal diameter greater than 14 cm, chronic distension lasting longer than 4 days, and the need for su rgical intervention are the risk factors for mortality. In this case, Ogilvie's syndrome with underlying scrub typhus and dengue fever co infection that led on to intractable fever not responding to any drugs, though surgically managed for Ogilvie's syndrome lead into sepsis and death thereafter.

CONCLUSION

Ogilvie's syndrome is an uncommon condition characterized by dilatation of the colon with no mechanical blockage. If not detected early, Ogilvie's syndrome can result in intestinal ischemia and perforation. It is important to maintain a high index of suspicion for the post caesarean section patient, presenting a progressive abdominal distension, despite the presence of falsely reassuring bowel sounds and passage of flatus. Conservative treatment is a successful first-line approach, but should not delay surgical management if proved to be necessary. When expeditious resolution is not accomplished, a multidisciplinary team consisting of the gynaecologist or obstetrician, surgeon, radiologist, and intensivist is required to avoid diagnostic delays and thereby reducing morbidity and death rates. But this case being an exception with the multidisciplinary approach and appropriate surgical management with associated scrub typhus and dengue co infection, patient had poor prognosis and reportedly ended up with maternal mortality.

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