CASE REPORT

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A Rare and Potentially Mortal Post-Caesarean Complication: Ogilvie's Syndrome-Acute Colonic Pseudo-Obstruction

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ABSTRACT Ogilvie's syndrome (acute colonic pseudo-obstruction) is acute massive functional dilatation of bowel without a distal mechanical obstruction. It is a rare, relatively unknown but potentially lethal entity because of its propensity for caecal perforation. Although commonly a disease of elderly with underlying co-morbidities especially following surgical interventions, caesarean section is the most common predisposing factor in obstetric age group. Diagnosis depends on the gross dilatation of caecum and ascending colon and exclusion of distal mechanical obstruction. Failure to respond to conventional measures necessities decompression of colon with colonoscopy and/or tube caecostomy in patients without perforation. Any sign of perforation mandates surgical intervention in which mortality is reported to be around 40%. Increased awareness and early diagnosis are at paramount importance to prevent bowel perforation.

Keywords: Ogilvie's syndrome; colonic pseudo-obstruction; caesarean section; perforation

Ogilvie's syndrome, also known as acute colonic pseudo-obstruction is an acute massive dilatation of bowel in the absence of distal mechanical obstruction. It is a rare but potentially lethal entity due to increased colonic intraluminal pressure exceeding the perfusion pressure of blood supply of caecum and ascending colon, eventually resulting caecal necrosis and perforation. It is usually seen in elderly who have underlying co-morbidities especially following abdominal surgeries.[1] However, pregnancy and caesarean section are the most commonly associated predisposing factors in younger age group.[2]

Early diagnosis and appropriate management is essential in post-caesarean patients with clinical presentation mimicking paralytic ileus or mechanical bowel obstruction to decompress bowel before caecal perforation, which has 36-44% mortality rate.[3]

The aim of the present study is to stress the importance of early diagnosis and to increase the awareness of Ogilvie's syndrome among obstetricians. In the present report, we describe a case of Ogilvie's syndrome with a brief overview of current literature. Informed was taken from the patient for publication of this case report.

CASE REPORT

A 30-year-old pregnant woman at 39th weeks, gravida 3, para 2 was delivered by caesarean section for foetal distress. A low transverse caesarean section under spinal anaesthesia was carried out uneventfully. Postoperative period was unremarkable with oral intake of fluids eight hours postoperatively and solids on postoperative day one. She had gas and stool passage on postoperative day one. The mother and the baby

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did well and discharged in good health on postoperative day 2. On 3rd postoperative day, she was readmitted for nausea, vomiting, abdominal distension and pain with no gas or stool discharge. She had abdominal tenderness and hypoactive bowel sounds. Digital rectal examination was inconclusive. Her abdominal X-ray film revealed air-fluid levels but no significant bowel dilatation. The blood count and blood chemistry were within normal limits. Ultrasound scans were normal. A presumptive diagnosis of paralytic ileus was made. Conservative treatment with nasogastric drainage, no oral intake, parenteral hydration with IV neostigmine in addition to antiacid and antivomiting agents was initiated. The following day she had gas and stool discharge and her pain and distension relieved. However, she refused to remain in hospital on postoperative 4th day and discharged with her own request despite all warnings. On postoperative 9th day she was admitted again for nausea, vomiting, abdominal pain and considerable abdominal distension. She had no gas or stool discharge for the last 3 days. She had fever and a leucocytosis of 22.000/µl. Abdominal computed tomography (CT) revealed left hemi-diaphragmatic elevation, a perisplenic collection about 20 cm and several smaller widespread collections including interloop and subhepatic regions. At laparotomy, a 3 cm caecum perforation and several abscesses all over the abdomen was evident (Figure 1). All abscesses were drained followed by primary double layer caecum repair and a loop ileostomy. She was referred to a tertiary center for follow up. She recovered after the surgery and medical therapy. She was discharged a week later and booked for control visit. The loop ileostomy was closed three months later with no long-term sequela.

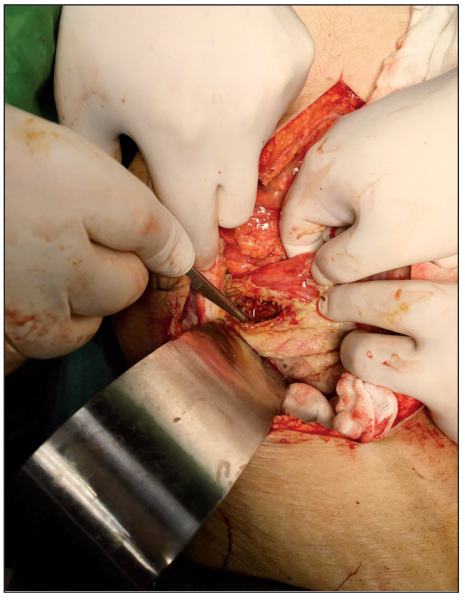

FIGURE 1: Intraoperative view of the case.

DISCUSSION

Although it is rare in obstetrical population, caesarean section is the most common predisposing factor for Ogilvie's syndrome in younger age group.[1] The exact incidence is unknown due to rarity of the condition and some cases go unnoticed with spontaneous resolution.

The etiology is unknown but an imbalance of colonic autonomic innervation with decreased parasymphathetic and increased symphathetic tone is thought to play a role. This leads to bowel immotility, functional obstruction and a resultant gross dilatation of ascending colon and caecum. Compression of gravid uterus on parasymphathetic nerves and/or opioid, oxytocin and tocolytic agent use may be the precipitating factor in obstetric population. Abdominal surgical procedures, severe pulmonary and cardiac conditions, electrolyte imbalances, malignancies and severe systemic infections are among the other precipitating factors. There is limited information in the literature about the development of Ogilvie's syndrome after caesarean section.[4-6]

The usual presentation is colicky abdominal pain, distension, nausea, and vomiting ranging from complete obstipation to intermittent flatus and stool discharge. Gross distension of colon (≥ 8-10 cm) usually in caecum and ascending colon on abdominal X-ray film is the hallmark of diagnosis besides air-fluid levels. X-ray films should be taken every 12-24 hours to follow the progress in caecum diameter for an impending perforation. Thus, Ogilvie's syndrome should be kept in mind when a presumed paralytic ileus is unresponsive to conservative treatment such as stopping oral intake, decompression via nasogastric tube, IV hydration, antiemetics, analgesics and correction of serum electrolytes. A small intestine ileus may complicate the differential diagnosis but a distinction could be made by a smaller diameter of air fluid level forming loops on X-ray, a biliary nasogastric discharge from NG tube,

and more importantly an abdominal CT with contrast would differentiate the two more reliably. Neostigmine 2 mg IV, an acethylcholinesterase inhibitor, is the only medication proven helpful in pharmacological treatment. Opioid analgesia is contraindicated because of the effects on colonic motility. Diagnosis depends on exclusion of possible mechanical obstructive lesions. A barium enema or abdominal CT may help ruling out mechanical obstruction. However, colonoscopy may yield better results for excluding the obstruction. Additionally, recent literature suggests flexible colonoscopy as a second line tool with 70-85% success in decompression of colon unresponsive to conventional primary measures.[7] But colonoscopy is difficult in this setting and must be performed with caution since it may highly increase the risk of perforation.

Classically, failure to respond to conservative management in 48-72 hours, a progressive dilatation of colon (caecum) more than 10-12 cm or findings suggestive of ischemia and/or perforation after proper evaluation should prompt interventional measures. Since there is a 40% mortality rate of perforation early diagnosis and timely intervention to decompress caecum conservatively with colonoscopy or tube caecostomy should not be delayed. In patients without ischemia and/or perforation tube caecostomy under radiological guidance is highly successful when available. It has low morbidity and can be performed under local anaesthesia if colonoscopy fails or will not be performed. However, surgery is indicated in case of perforation or ischemia or when these less conservative methods fail. Classically, colonic resection with ileostomy and mucous fistula is the surgical method of choice.

In the presented case, it is clear that perforation could be avoided if patient agreed to stay for follow up physical exams, X-rays, and colonoscopy at second admission. A repeat X-ray film would possibly disclose a massive distension of caecum. Additionally, passage of gas and stool, and relief of symptoms considerably shortly after conservative treatment proves that bowel habits are variable from intermittent flatus to complete obstipation in Ogilvie's syndrome. This should not mislead the staff who discharge patients early until it is certain that bowel motility is restored fully in busy hospitals with high turnover.

In conclusion, Ogilvie's syndrome is a rare but life threatening entity in obstetric population. Increased awareness and early diagnosis are at paramount importance to prevent bowel perforation and mortality.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Mustafa Albayrak, Fatih Keskin, İsmail Bıyık, Hüseyin Timuçin, Ali Sancak;* ***Design:*** *Mustafa Albayrak;* ***Data Collection and/or Processing:*** *Mustafa Albayrak, Hüseyin Timuçin, Ali Sancak;* ***Literature Review:*** *Mustafa Albayrak, İsmail Bıyık;* ***Writing the Article:*** *Mustafa Albayrak, İsmail Bıyık;* ***Critical Review:*** *Mustafa Albayrak, İsmail Bıyık, Fatih Keskin.*

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