

Ogilvie's Syndrome: A case report

Asif Ali Syed, Anum Naz, Nabiha Amjad, Ambreen Bhutto

Received:
5th June 2017

Accepted:
5th May 2018

Abstract

Ogilvie's syndrome or Acute Colonic Pseudo-Obstruction (ACPO) is a rare, post-surgical complication characterized by progressive dilatation of the cecum and right hemi colon in absence of any mechanical obstruction. The hallmark clinical presentation is abdominal distention with or without pain. Etiology is attributed to underlying medical illness, electrolyte imbalance or recent surgical procedure.

Here, we present a case of 32 year old female who was admitted in our hospital which full term pregnancy. She was delivered at our hospital by caesarean section under spinal anesthesia. She did well in the first 24 hours. Then she developed abdominal pain and abdominal distension and vomiting. Abdominal decompression was done using naso gastric tube and the patient was kept nil orally. Her abdominal x-ray suggestive of distended large bowel. there is no improvement on conservative management. Therefore she underwent laparotomy and right hemi colectomy done. Patient has uneventful recovery.

Keywords: Ogilvie syndrome, caesarean section, Acute Colonic Pseudo-Obstruction

Introduction:

Ogilvie syndrome has been first introduced in the therapeutic writing by a British surgeon known as Sir William Ogilvie in 1948.¹ This syndrome is likewise named as acute colonic pseudo-obstruction (ACPO). It is a scarce disorder more often occur post cesarean section.² This post-surgical complication is characterized by dynamic dilatation of cecum and right hemi colon without any mechanical obstruction.³ Vanek VW et al. had analyzed 400 cases of Ogilvie syndrome, among those cases 39 were related to obstetrics and gynaecology and 16 cases took after a caesarean section.⁴ With increasing rate of caesarean section this rare syndrome is likely to seen more frequently by obstetricians. If left untreated, it may lead to bowel perforation, ischemia, peritonitis and death.⁵ Therefore early diagnosis and treatment is necessary to prevent severe morbidity and mortality.³ The case re-

ported here describes a female patient of 32 year old who developed this acute clinical condition after a caesarean section.

Case Presentation:

A 32 year old female in her third pregnancy (gravida 3, parity 2) was presented at our hospital. She had been scheduled for her elective C-section at 36 weeks of gestation. She was a known case of polycystic ovary syndrome (PCOS) and underwent treatment for infertility. The obstetric history showed previous 2 caesarean sections under general anesthesia. She also contacted Chikungunya virus during her 28th week of pregnancy confirmed by RT-PCR results, which was duly treated. A lower segment C-section was performed under spinal anesthesia (2.7ml 0.5% bupivacaine with 300mcg; L3-L4 intervertebral space) and a healthy baby girl was born. There were no intraoperative compli-

**Jinnah Medical and
Dental College, Karachi**
AA Syed
N Amjad

Patel Hospital, Karachi
A Naz

Civil Hospital, Karachi
A Bhutto

Correspondence:
Dr. Anum Naz,
F-8 Erum Villas, Gulshan-e-
Iqbal Block-14, Karachi.
Cell: + 92-300-8266843
Email: dranumnaz09@
gmail.com

cations and total maternal blood loss was estimated less than 1,000ml.

On 1st post-operative day, initially patient's condition was stable, with normal blood pressure and respiratory rate. On physical examination the abdomen was found soft. After 18 hours she complained about the severe abdomen pain, nausea & vomited greenish material several times. Approximately after 34 hours on 2nd post-operative day, abdominal distention was observed with audible bowel sounds. The abdominal plain radiographs revealed colonic dilatation and diagnosis of acute colonic pseudo-obstruction (OS) was made. The abdominal girth was 114cm, N/G tube was passed and patient was kept on NPO.

The N/G tube partially relieved the abdominal pain, vomiting and nausea, but the colonic dilatation remained present. She was then directed to emergency laparotomy where a significantly distended colon with cecal ischemia and perforation was found. A right hemicolectomy was done with primary two-layer seromuscular anastomosis.

Postoperatively she was shifted back to ICU. The standard management of peritonitis was given along with antibiotics, nutritional support and fluids. The patient's conditions got better and shifted to the ward after 6 days. Hospital discharge was done 10 days after the cesarean section with instructions for follow-up.

Discussion:

The abdominal distension in Ogilvie's syndrome is similar to that of a paralytic ileus therefore, it is important to be aware of Ogilvie's syndrome to be considered as a differential diagnosis leading to a timely recognition and successful treatment.⁶

It has been observed more often after C-section.² The syndrome has been also related with severe burns, trauma, spinal anesthesia, alcohol, respiratory failure, drugs (antidepressants, narcotic analgesics, corticosteroids, calcium channel blockers, antipsychotic, narco-

leptics and syntocinon), opioid use, electrolyte disturbance, serious infections, CABG, total joint replacement and neurologic disorders.^{2,4,7,8}

The exact patho-physiology of Ogilvie's syndrome remains ambiguous and obscure. Several theories have been postulated attempting to create a better understanding of this syndrome. OS is due to an imbalance between the autonomic innervation of the colon with a marked increase in the sympathetic activity and suppression of the parasympathetic activity.^{2,4,9} The Parasympathetic nervous system promotes gut motility whereas, the sympathetic nervous system demotes it.² There could be several reasons leading to this imbalance in our patient.

Firstly, the pain, stress and Trauma of C/S and childbirth may cause to an increase in the Sympathetic innervation and a loss of Parasympathetic stimulation that led to colonic dilatation. Secondly, Obstetric patients are found to have a decreased serum estrogen post operatively which leads to a decreased parasympathetic tone in the body.¹⁰ Another possible reason for this parasympathetic neuropraxia can be due to the anatomical location of the S2-S4 nerves that are placed closely to organs prone to risk of injury during C/S such as the Cervix, Vagina and the broad ligament of Uterus.¹¹

It is very difficult to diagnose Ogilvie's Syndrome as it a diagnosis of exclusion; whereby excluding every mechanical cause of obstruction through investigation it is confirmed to be Ogilvie's syndrome. According to a study done by Patty L. Tenofsky,⁶ all of patients who died to Ogilvie's syndrome were not diagnosed until after the 3rd post-op day. Therefore, highlighting the immense importance of a timely diagnosis and how a delay impacts the mortality rate of these patients.

Plain Abdominal X-ray films are a quite reliable and easily available diagnostic modality. CT scan and gastrograffin can also be used. Management of such patients is dependent upon their colonic diameter and presence of cecal necrosis and perforation. If the diameter exceeds 9cm or

necrosis and perforation is suspected, a surgical approach is indicated. Otherwise, a non-surgical approach comprising of conservative and pharmacological management is adopted.

The conservative management includes bowel rest (NPO), Nasogastric tube suction, correction of electrolyte imbalance, fluid resuscitation, insertion of rectal tube along with discontinuation of any previous drugs that may influence bowel activity such as narcotics. A clinical resolution has been observed in 26 of the 28 patients who were given Neostigmine,¹² it is a reversible acetyl cholinesterase inhibitor that acts on the muscarinic receptors to enhance the colonic motility. This also supports the previously proposed theory that Ogilvie's syndrome is perhaps, due to a suppression of parasympathetic stimulation within the colon and an overexpression of the sympathetic activity.

Most patients will show positive results after this but if they fail to resolve the sign and symptoms & colonic decompression is next line of treatment.¹³ In an event that a patient exhibits any signs of cecal necrosis and perforation and massive abdominal distention that exceeds 9cm¹⁴ in diameter an urgent surgical treatment with a right hemi colectomy and cecostomy is indicated.^{14,15}

Conclusion:

In conclusion, Ogilvie's syndrome is a rare disorder and we are only aware of two other cases reported from Pakistan, neither of which required a surgical intervention. With increasing number of obstetric patients undergoing caesarean section an awareness of this disease is cardinal so it can be considered as a differential when such a suspicion arises in order to initiate management. Timely recognition is of utmost importance in reducing the mortality and morbidity of this syndrome.

Conflict of interest: None

Funding source: None

Role and contribution of authors:

Dr Asif Ali Syed, collected the references and did the initial writeup.

Dr. Anum Naz, collected the references, and helped in introduction writing.

Nabiha Amjad, she has collected the references.

Dr Ambreen Bhutto, critically review the article, and made the final changes.

References:

- Ogilvie H. Large-intestine colic due to sympathetic deprivation. *British Medical Journal*. 1948;2(4579):671.
- Saha AK, Newman E, Giles M, Horgan K. Ogilvie's syndrome with caecal perforation after Caesarean section: a case report. *Journal of medical case reports*. 2009;3(1):6177.
- Srivastava G, Pilkington A, Nallala D, Polson D, Holt E. Ogilvie's syndrome: a case report. *Archives of gynecology and obstetrics*. 2007;276(5):555-7.
- Vanek VW, Al-Salti M. Acute pseudo-obstruction of the colon (Ogilvie's syndrome). *Diseases of the colon & rectum*. 1986;29(3):203-10.
- Villar HV, Norton LW. Massive cecal dilation: pseudoobstruction versus cecal volvulus? *The American Journal of Surgery*. 1979;137(2):170-4.
- Tenofsky PL, Beamer RL, Smith RS. Ogilvie syndrome as a postoperative complication. *Archives of Surgery*. 2000;135(6):682-7.
- Cho F-N, Liu C-B, Li J-Y, Chen S-N, Yu K-J. Adynamic ileus and acute colonic pseudo-obstruction occurring after cesarean section in patients with massive peripartum hemorrhage. *Journal of the Chinese Medical Association*. 2009;72(12):657-62.
- Dickson M, McClure J. Acute colonic pseudo-obstruction after caesarean section. *International journal of obstetric anaesthesia*. 1994;3(4):234-6.
- Wegener M, Börsch G. Acute colonic pseudo-obstruction (Ogilvie's syndrome). *Surgical endoscopy*. 1987;1(3):169-74.
- Othman M, Khojah S, Alkholy T, Rafie L. Ogilvie's syndrome: Case report. 2014.
- Moore J, Gladstone N, Lucas G, Ravry M, Ansari A. Successful management of post-caesarean-section acute pseudoobstruction of the colon (Ogilvie's syndrome) with colonoscopic decompression. A case report. *The Journal of reproductive medicine*. 1986;31(10):1001-4.
- Ponec RJ, Saunders MD, Kimmey MB. Neostigmine for the treatment of acute colonic pseudo-obstruction. *New England Journal of Medicine*. 1999;341(3):137-41.
- Tsirlina VB, Zemlyak AY, Avery MJ, Colavita PD, Christmas AB, Heniford BT, et al. Colonoscopy is superior to neostigmine in the treatment of Ogilvie's syndrome. *The American Journal of Surgery*. 2012;204(6):849-55.
- Munzar Z, Munir TA, Asad M. Ogilvie's Syndrome (Acute Colonic Pseudo-Obstruction) After Caesarean Section. *Journal of the College of Physicians and Surgeons Pakistan*. 2013;23(4):298-300.
- Khan MW, Ghauri SK, Shamim S. Ogilvie's Syndrome. *J Coll Physicians Surg Pak*. 2016;26:989-91.