

CASE REPORT

## Ogilvie Syndrome with Caecal Perforation After Caesarean Section

K. Geethadevi<sup>1</sup> · D. Gowthami<sup>1</sup> · U. Chakrapani<sup>1</sup> · R. S. Ramadevi<sup>1</sup>

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### About the Author



**Dr. K. Geethadevi** is working as senior consultant obstetrician and gynaecologist in Aayush Hospitals, Vijayawada. She served as secretary of Vijayawada Obstetrics and Gynaecological Society and is the first vice-president of VOGSI. Her areas of interest are high-risk pregnancy and endoscopy.

### Introduction

Ogilvie syndrome (acute colonic pseudo-obstruction) which usually occurs in seriously ill and post-operative patients can rarely occur after caesarean section. It is characterized by massive dilatation of the colon in the

absence of mechanical obstruction. This may lead to rupture or perforation of the caecum or colon causing faecal peritonitis and sepsis which carries a very high morbidity and mortality rate [1]. We present a case of Ogilvie syndrome with caecal perforation following caesarean section which was managed successfully in our institute. This is the first ever case report from India.

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Dr. K. Geethadevi is working as Senior Consultant Obstetrician and Gynaecologist in Aayush Hospitals, Vijayawada, Andhrapradesh, India. Dr. D. Gowthami is working as a Junior Consultant Gynaecologist in Aayush Hospitals, Vijayawada, Andhrapradesh, India. Dr. U. Chakrapani is working as a Surgical Gastroenterologist in Aayush Hospitals, Vijayawada, Andhrapradesh, India. Dr. R. S Ramadevi is working as a Visiting Consultant in Aayush Hospitals, Vijayawada, Andhrapradesh, India.

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✉ K. Geethadevi  
geethakdevi@yahoo.in

### Case Report

A thirty-three-year-old G3P2L2 with two previous caesarean sections was admitted for elective LSCS which was performed on 12/06/2017 under spinal anaesthesia with 0.5% heavy bupivacaine 1.8 ml. Pfannenstiel's incision was made. She delivered a girl child with good APGAR with birth weight 3.1 kg. There were no adhesions. Surgical procedure was uneventful. Ten units of oxytocin i.m.

<sup>1</sup> Aayush Hospitals, Vijayawada, Andhrapradesh, India

and ten units of i.v. infusion were given following delivery. Blood loss was within normal limits. Liquid diet was started after 8 h. On 2nd POD, i.e. on 14/06/2017, the patient developed abdominal distension and upper abdominal pain. On examination, abdomen was distended and bowel sounds were sluggish. Surgical gastroenterologist opinion was asked. Plain X-ray abdomen erect posture was taken, which was suggestive of paralytic ileus with minimal air under diaphragm (which is normal in post-laparotomy cases).

Patient was treated conservatively with nil per orally, i.v. fluids, Ryle's tube aspiration, correction of electrolyte imbalance. Dulcolax suppositories were given. Patient used to have one spike of temperature 101°F daily and total count elevated to 16,000. Hence Inj.piperacillin + tazobactam 4.5 grams iv eight hourly was started. Patient started passing small quantity of liquid stools on 4th POD, but abdominal distension continued. Plain X-ray abdomen erect posture was repeated on 16/06/2017, which showed little improvement.

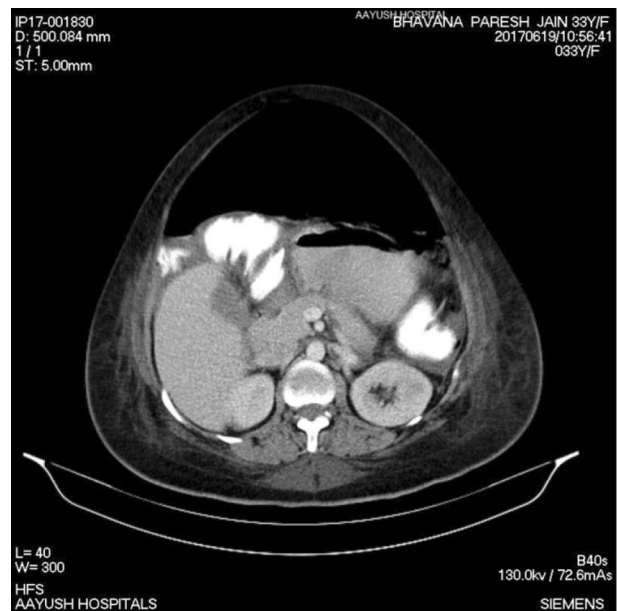
Her total count came down to 10,000 on 4th POD after starting piperacillin + tazobactam. On 6th post-op night, patient had a high spike of fever at 104 F. Repeat plain X-ray abdomen erect posture on 7th POD, i.e. on 19/06/2017, showed an increase in air under diaphragm (Fig. 1) when compared to previous X-ray.

CECT was performed immediately, which showed contrast leak near hepatic flexure from ascending colon with gas in the peritoneal cavity (Fig. 2).

Patient and her family members were counselled, and the patient was taken for emergency laparotomy.



**Fig. 1** X-ray on 7th post op day showing increased air under diaphragm



**Fig. 2** Contrast CT abdomen confirming the pneumoperitoneum and contrast leak seen from ascending colon near hepatic flexure



**Fig. 3** Intraoperative picture of necrotic Ascending colon with 5-6 small perforations on right lateral wall with faecal contamination of peritoneal cavity

Abdomen was opened by sub-umbilical midline incision. Pus flakes and about 750 ml of serous fluid were present in peritoneal cavity which were sent for culture. Ascending colon was found necrotic with 5–6 small perforations on the right lateral wall with faecal contamination of peritoneal cavity (Fig. 3).

Rest of the bowel loops appeared normal. Right hemicolectomy with end-to-side ileotransverse anastomosis was performed. Post-operatively, broad-spectrum i.v. antibiotics (imipenem, clindamycin) were started. Culture and sensitivity of peritoneal fluid showed heavy growth of klebsiella, enterococcus, candida and *E. coli* (faecal contamination). Linezolid and fluconazole injections were started as per culture report. Post-operatively, the patient

was on parenteral nutrition and electrolyte imbalances were corrected. Post-operatively, serial abdominal X-ray was taken, which is suggestive of moderate pleural effusion and elevation of right dome of diaphragm for which physiotherapy and nebulization were carried out. The patient passed flatus and stools on 3rd POD. On day 9, the patient was afebrile, tolerating normal diet, passing flatus and stools normally and discharged in stable condition.

Histopathological examination of the resected bowel showed gangrenous changes with secondary acute on chronic inflammation.

## Discussion

The true incidence of acute colonic pseudo-obstruction (ACPO) is unknown as mild cases resolve spontaneously. It is generally a disease of the elderly, but in young women of childbearing age, caesarean section is the most common operative procedure associated with this syndrome [2].

The pathogenesis is multifactorial. Anatomically, the sacral parasympathetic nerves pass in close proximity to cervix and vagina and terminate to supply left colon. Either an imbalance between sympathetic and parasympathetic nervous systems or a temporary neuropraxia or disturbance of sacral parasympathetic nerves due to surgery may lead to adynamic ileus of the colon. With competent ileocaecal valve, the caecum and colon dilate enormously, causing compression of the vessels in the wall leading to ischaemic necrosis and perforation [3]. If not treated early, mortality may be as high as 36–50% [4].

Patients may develop signs and symptoms of mechanical large bowel obstruction with abdominal distension and pain, may pass flatus and small quantity of faeces, may have nausea and may have low-grade fever and leucocytosis. Bowel sounds may be normal, high pitched or absent [2]. Vomiting may be a late symptom.

If a patient had perforation of the bowel, she may be acutely ill, with features of sepsis with dehydration, high-grade temperature, electrolyte imbalances and oliguria.

Clinical suspicion is of utmost importance. Plain X-ray abdomen erect posture shows the acute dilatation of the large bowel. If perforation occurs, gas under diaphragm (which may be a normal feature after laparotomy) increases. So serial abdominal X-ray is recommended. In the initial phases, CECT of abdomen shows ileus of the large bowel. If colonic perforation occurs contrast leak into the peritoneal cavity will be seen.

In the initial phases when there is no evidence of perforation, conservative management by nil per orally, Ryle's tube aspiration, correction of electrolyte imbalances and

strict ambulation may relieve ileus [2]. If colonic dilatation is more than 9–10 cm by X-ray or CT scan, pharmacological therapy with neostigmine injection or endoscopic colonic decompression with a large flatus tube can be tried [5]. In the absence of contraindications (no mechanical large bowel obstruction, bronchial asthma, perforation), 2.5 mg i.v. injection of neostigmine over 3–5 min can be given. Immediate response by passage of flatus and sustained response by decrease in abdominal distension can be noted [6]. The success rate is found to be 85%. Other medications like erythromycin and metoclopramide also can be tried.

Laparoscopic or CT-guided caecostomy was also performed in few cases [7]. Once there is perforation, emergency laparotomy and bowel resection with anastomosis with or without temporary diversion should be performed.

In our case, initially we thought it to be a case of paralytic ileus as X-rays did not show clear-cut colonic dilatation and we had not suspected Ogilvie syndrome; hence, neostigmine was not tried. But on day 7, since serial abdominal X-rays showed an increase in gas under diaphragm, CECT was performed to confirm perforation, and timely intervention with emergency laparotomy was carried out; hence, we could save the patient from serious morbidity and mortality.

## Conclusion

Clinical suspicion, early referral to surgeon, careful follow-up with plain X-ray or CECT of the abdomen, and early identification of perforation are the key points for better outcomes.

## Compliance with Ethical Standards

**Conflict of interest** The authors declare that there is no conflict of interest.

**Informed Consent** We have taken informed consent of patient for taking photographs and publishing the case in journal. We have maintained the respect and confidentiality of our case. We have not caused any harm to the patient. Our case report is independent and impartial.

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