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## A rare complication of cardiac surgery: Ogilvie syndrome

A 58-year-old female was admitted to the intensive care unit with acute heart failure and mitral valve prosthesis dysfunction. Surgical history included mitral valve replacement for rheumatic heart disease and mitral restenosis after open mitral commissurotomy nine years ago. The following day, the patient underwent a reoperation for prosthetic valve dysfunction with the use of ON-X-27/29 mechanical valve and De Vega 2 tricuspid annuloplasty. In the postoperative period, the patient's condition remained extremely critical because of severe cardiovascular insufficiency, multiple organ failure, and sepsis.

On the fourth post-operative day, abdominal distension with retention of stool and gases were observed. However, the abdomen remained soft with no signs of peritoneal irritation, and the patient did not react to palpation. Percussion revealed tympanitis above the large intestine, and auscultation revealed weak peristalsis. Intra-abdominal pressure did not exceed 20 cmH<sub>2</sub>O. X-ray and ultrasound of the abdominal cavity showed pronounced pneumatosis, and Kloiber's cups were absent on radiographs.

Multislice spiral computed tomography with a contrast agent [Figure 1] revealed a pronounced dilation of the large intestine filled with contents. The cecum was markedly altered; its diameter was 8 cm throughout all the length. The wall of the large intestine was thickened up to 2 mm with a moderate accumulation of the contrast agent in the arterial phase. Intraluminal masses were absent. Perifocal adipose tissue was edematous.

A diagnosis of acute colonic pseudo-obstruction was confirmed. Nasogastric intubation was performed, and a flatus tube was inserted into the rectum. The following prokinetic agents were added to the treatment: 2 mg of proserine 0.05% solution and 250 mg of erythromycin were diluted with 250 mL of saline, which were injected intravenously every 8 h. The undertaken measures improved abdominal symptoms within 3 days.

By the ninth post-operative day the patient's abdominal complaints had resolved.

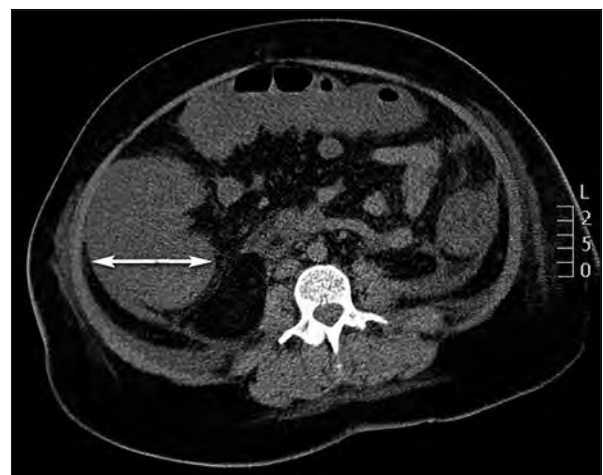
Ogilvie syndrome occurs in approximately 3.5% of cardiosurgical patients and is always difficult to diagnose. The signs of Ogilvie syndrome include pneumatosis of the large intestine without Kloiber's cups on plain abdominal radiographs. Abdominal ultrasonography may also reveal dilated large intestinal loops. Multislice spiral computed tomography shows the dilation of the colon along the distance from the cecum to the splenic flexure and the absence of pathological formations in the intestinal lumen.<sup>[1]</sup>

If Ogilvie syndrome is diagnosed on time, patients usually respond well to treatment. Foremost, enteral feeding is excluded, and nasogastric intubation is performed. Adequate substitutive intravenous therapy is also important. Drugs causing or worsening clinical manifestations of the disease, such as narcotics and calcium channel blockers, are withdrawn. Usually, these measures make it possible to achieve positive results within 3–5 days.<sup>[2]</sup>

The optimal treatment of Ogilvie syndrome has not been defined yet. Administration of prokinetics (acetylcholinesterase inhibitors, selective antagonists of peripheral opioid  $\mu$ -receptors, erythromycin, etc.) have been reported to have contradicting results.<sup>[3]</sup>

The absence of therapeutic effect within 48–72 h and/or distension of the cecum for more than 10–12 cm is a reason for colonoscopic decompression.<sup>[4]</sup> To minimize the frequency of disease relapse, it is reasonable to perform peroral lavage with the balanced electrolyte solution of polyethylene glycol<sup>[5]</sup> or insert a flatus tube beyond the splenic flexure under colonoscopic control.<sup>[6]</sup>

Surgical operations in Ogilvie syndrome are necessary when conservative management and endoscopic decompression are ineffective, or in the case of peritonitis caused by ischemia and subsequent necrosis and perforation of the intestinal wall. The type of surgical procedure depends on the features of each clinical case. Cecostomy may be performed for colonic decompression using either a miniature access or a combined endoscopic–radiological monitoring. In case of peritonitis, the type of surgery is selected depending on the pathology of the large intestine (resection or total colectomy).<sup>[7]</sup>



**Figure 1:** Multislice spiral computed tomography of abdomen showing greatly dilated colon. The diameter of the cecum was up to 8 cm (arrow)

**Declaration of patient consent**

The authors certify that appropriate patient consent was obtained.

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**Conflicts of interest**

There are no conflicts of interest.

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