



## Pseudo-colonic obstruction after lumbar spine surgery : A case report

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**Acute colonic pseudo-obstruction (Ogilvie's syndrome) is characterised by abdominal distension and massive colonic dilatation without any mechanical cause of obstruction. The pathogenesis remains unknown but likely involves imbalance between sympathetic and parasympathetic colon innervation. This syndrome is well known in orthopaedic surgery, as trauma and orthopaedic surgery have been reported as aetiological factors. Some cases have been reported after cervical discectomy.**

**We report a case of Ogilvie's syndrome after lumbar spine surgery. Medical treatment including parasympathetic agent was unsuccessful and the patient underwent a right colectomy. The pathophysiology and treatment are discussed based on a review of the literature.**

**Keywords :** pseudo colonic obstruction ; Ogilvie syndrome ; lumbar spine surgery.

### INTRODUCTION

Acute colonic pseudo-obstruction (Ogilvie's syndrome) is characterised by abdominal distension and massive colonic dilatation without any mechanical cause of obstruction (1). Ogilvie first described this syndrome in 1948 (4). The pathogenesis remains unknown but likely involves imbalance between sympathetic and parasympathetic colon innervation (6). Trauma, sepsis, and intrapelvic or orthopaedic surgery have been reported as aetiological factors (9).

When considering surgical patients, some cases have been reported after cervical discectomy (1), after cesarean section (7), after spinal anaesthesia (9) and after laparoscopic surgery (7).

We report a case of Ogilvie's syndrome after lumbar vertebral surgery. The pathophysiology and treatment are discussed based on a review of the literature.

### CASE REPORT

A 79-year-old man was treated in our institution for multiple myeloma (MM). He was admitted for lumbar pain since 6 months. He had a previous

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history of cerebro-vascular stroke. General examination was unremarkable apart from lumbar sensitivity on palpation and right inferior limb paresia. Laboratory results were normal. NMR of the spine showed L3 osteolysis related to a vertebral metastasis of MM. The patient was treated by external radiotherapy followed by surgery. Surgery was carried out through a posterior approach. We performed resection of the third lumbar vertebral body with instrumented reconstruction. The surgical intervention was uneventful. On the fourth post-operative day, he developed abdominal distension. Physical examination revealed a distended tender abdomen and decreased bowel sounds. Blood investigations were normal. Plain abdominal radiography showed marked dilatation of the caecum, ascending and transverse colon (fig 1). CT scan of the abdomen confirmed dilatation of the entire right colon without mechanical obstruction. The caecum measured 12 cm in diameter (fig 2). Ogilvie's syndrome was suspected. Medical treatment was immediately applied and consisted of nasogastric decompression, rectal tube placement and neostigmine (prostigmine, Roche, Basel, Switzerland) administration. We observed no improvement with medical treatment and in view of the important colonic distension ( $> 9$  cm), we decided to perform surgery. At laparotomy the caecum measured more than 15 cm in diameter and presented signs of serosal effraction without perforation. A right hemicolectomy was carried out. The postoperative course was uneventful.

## DISCUSSION

Acute colonic pseudo-obstruction (Ogilvie's syndrome) is defined by abdominal distension and massive colonic dilatation without any mechanical cause of obstruction. The most serious complication of Ogilvie's syndrome is perforation of the caecum. Early recognition and treatment of pseudo-obstruction of the colon may prevent caecal perforation, which reportedly carries a mortality rate of 25% to 60% (2). Signs and symptoms resemble those of paralytic ileus. It affects mainly elderly, bedridden patients. The pathogenesis remains unknown but likely involves imbalance between



*Fig. 1.* — Plain radiograph of the abdomen on the fourth day after operation, showing dilatation of the right colon without mechanical obstruction.



*Fig. 2.* — CT-scan of the abdomen on the fourth day after operation, showing marked dilatation of the caecum.

sympathetic and parasympathetic colon innervation (6). The fact that Ogilvie's syndrome may occur after manipulation of vertebral structures (spinal anaesthesia, lumbar surgery) could support this hypothesis.

It is currently well recognized that a rapid medical approach is the most appropriate treatment in patients presenting without complications. Medical treatment consists of nasogastric suction, rectal tubes, restriction of oral intake, correction of fluid and electrolyte imbalance, and parasympathetic agent administration if the diagnosis is made pre-operatively and abdominal radiograph shows a diameter of the distended caecum less than 9 cm (3, 8, 10). If caecum overdilatation occurs, then colonoscopic decompression can be proposed (3). Paran *et al* published good results with neostigmine (2.5 mg) in 10 out of 11 patients (5). Surgical management is indicated if caecal diameter is greater than 9 cm or conservative treatment is ineffective or there is evidence of caecal perforation (3).

In absence of perforation or bowel ischaemia, caecostomy is the procedure of choice but in cases of bowel ischaemia and perforation resection with or without primary anastomosis should be performed (3). The complications of Ogilvie syndrome include perforation, peritonitis and shock. The mortality rates in cases of colonic perforation are 43-50%.

In our case, medical treatment was first attempted, without significant clinical and radiological response. The important colonic distension (more than 9 cm) on radiology forced us to opt for surgery. The delay in diagnosis in our case was probably responsible for medical inefficacy.

In conclusion, Ogilvie's syndrome is a rare condition. Vertebral surgery probably acts as pre-

disposing factor. Complications following pseudo-obstruction may be avoided if pseudo-obstruction is recognized early and treated with optimal conservative treatment including parasympathetic drugs. In case of failure of medical treatment or complications, surgery remains the treatment of choice.

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