

## Acute Colonic Pseudo Obstruction (Ogilvie's Syndrome): A Case Report and CT Findings.

Hind Sahli, Asaad El Bakkari, Sanae Amalik, Hounayda Jerguigue, Rachida Latib and Youssef Omor  
Radiology Department, National Institute of Oncology, "Sidi Mohammed Ben Abdellah", Ibn Sina Hospital, Mohamed V University, Rabat-Morocco.

### ARTICLE INFO

#### Article history:

Received: 5 May 2021;

Received in revised form:

8 June 2020;

Accepted: 18 June 2020;

#### Keywords

Ogilvie's Syndrome,  
Colonic Distention.

### ABSTRACT

Acute colonic pseudo-obstruction named Ogilvie's syndrome, is a distinct form of colonic dilatation without evidence of underlying mechanical or anatomic cause. Despite the absence of an obstructing lesion, colonic distention can be rapidly progressive and lead to necrosis and perforation of the large bowel. CT scan is the most useful imaging CT images helps to differentiate colonic pseudo obstruction from other causes of obstruction. We present a case of Ogilvie's syndrome, with typical imaging features.

© 2021 Elixir All rights reserved.

### Introduction

Ogilvie's syndrome also known as acute colonic pseudo-obstruction, was first described in 1948 by a British surgeon named William Ogilvie (1). Pseudo-obstruction is characterized by radiological signs and clinical symptoms of mechanical obstruction but without a detectable mechanical cause (2). Ogilvie's syndrome is typically found in hospitalized patients, who most often have severe comorbidities and had underlying predisposing medical and surgical conditions (3) (2).

### Case report

Our patient was a 62-year-old Moroccan male who was hospitalized in the digestive surgery department of our oncology hospital for the treatment of a gastric tumor. During his hospitalization, the patient presented an abdominal discomfort and distension associated with non-bilious vomiting and absolute constipation.

The examination showed an abdominal distention and tenderness. The abdomen was tympanic, and auscultation revealed the presence of bowel sounds, high-pitched.

An initial blood workup revealed mild leukocytosis with marked hypokalemia (2.3mmol/L). The electrocardiogram showed no pathological signs.

CT examination showed colonic dilatation concerning more specifically the transverse colon, with a transition zone sitting close to the splenic flexure. Structural obstructing lesions were not visualized. The diagnosis was made and the patient had progressed well under conservative treatment with nasogastric tube and neostigmine. Some electrolyte imbalances have been corrected.

### Discussion

Acute colonic pseudo-obstruction (Ogilvie's syndrome) is a disorder characterized by acute dilatation of the colon without mechanical or anatomical cause that obstructs the flow of intestinal content (2). It occurs on a previously healthy colon.

The underlying pathophysiology remains poorly understood, but is thought to be in part related to an imbalance of the autonomic nervous system in the regulation of colonic motility with excessive Parasympathetic Suppression and / or stimulation of the sympathetic tone (4). This Theory supports the use of agent parasympathomimetic in the treatment of Ogilvie's syndrome (5).

Clinical manifestations of Ogilvie's syndrome vary, and include symptoms that are related to abdominal distension such as constipation, nausea with vomiting and pain (1), (5). Symptoms can settle in 3 to 4 days, but may also develop more acutely within 48 Hours of the beginning of symptom (6).

Ogilvie's syndrome usually involves the cecum and right colon, but can affect the entire large and small bowel (1). The most severe complication is the perforation. It is due to an increase in intra-abdominal pressure which subsequently leads to venous congestion and ischemia.

Fortunately, perforation is rare occurring in only 1% to 3% of cases, but it is associated with a high mortality rate of 50% to 71%, compared with 8% in the non-perforated group (3). The risk of perforation depends on the diameter of the cecum, being when less than 12 cm. Typically, diameters >14 cm are believed to be associated with a high risk of perforation (3),(1).

Pseudo-obstruction is often confused, both clinically and radiologically, with other pathologies such as mechanical obstructions and paralytic ileus.

Early diagnosis of pseudo obstruction is important for appropriate management. Abdominal radiographs show non-specific signs such as gaseous colic distension. The barium enema can confirm the diagnosis, but it is an examination to be avoided if there is any doubt about colonic perforation. The abdominal pelvic CT scan is the most relevant examination because it provides information on the cause of the intestinal occlusion as well as its topography. Dilatation

classically concerns the cecum and the ascending colon with a transition zone near the splenic flexion (6). The transition zone can be used to differentiate pseudo obstruction from paralytic ileus as well as from adhesive obstruction (7). The location of transition zone is characteristic, it often sits close to the splenic angle and this is explained by the different innervation of the colon. It is important to know that the parasympathetic innervation of the colon undergoes a transition from the vagal nerve for the proximal part to the sacral nerve for the distal part (7).

The management is often conservative, in the absence of signs of intestinal ischaemia or perforation and provided the cecal diameter is less than 12cm (8). In addition, patients must stop taking narcotic treatments, correct electrolyte imbalances and treat an underlying infection if one exists. Satisfying results are obtained in 83 to 96% of patients within 2 to 6 days of starting treatment (8), (3). This conservative treatment is based on nasogastric suction, enemas and neostigmine, which is very effective in the treatment of pseudo-colonic obstruction (7).

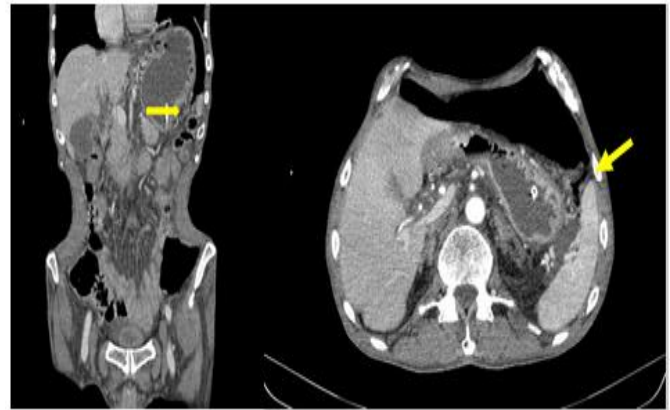
Invasive procedures or surgery are indicated for patients with a more severe initial presentation and for disease refractory to conservative therapy (6). Patients who fail or have contraindications to pharmacological treatment must be assessed for endoscopic decompression (6). Traditional operative management is necessary when the interventions above are unsuccessful or when there are development of intestinal ischemia or perforation (6).



**Figure 1. Topogram of an abdominal CT scan showing dilated colon**



**Figure 2. Axial contrast-enhanced CT image showing markedly distended transverse colon (ARROW) with a maximum diameter of 65mm**



**Figure 3. Coronal contrast-enhanced CT image showing the transition zone which is located opposite the splenic flexure**

### Conclusion

In summary, despite the fact that Ogilvie's syndrome is relatively rare, early detection and appropriate management are very important, especially in patients already suffering from chronic diseases.

### References

- Haj M, Haj M, Rockey DC. Ogilvie's syndrome: management and outcomes. *Medicine (Baltimore)*. 2018 Jul;97(27):e11187.
- Acute colonic pseudo-obstruction (Ogilvie's syndrome) - UpToDate [Internet]. [cited 2021 Jan 21]. Available from: <https://www.uptodate.com/contents/acute-colonic-pseudo-obstruction-ogilvies-syndrome>
- Maloney N, Vargas HD. Acute Intestinal Pseudo-Obstruction (Ogilvie's Syndrome). *Clin Colon Rectal Surg*. 2005 May;18(2):96–101.
- Harnsberger CR. Acute colonic pseudo-obstruction (Ogilvie's syndrome). *Semin Colon Rectal Surg*. 2019 Sep 1;30(3):100690.
- Irislimane M, Clerk-Lamalice O, Morel E, Giovanoli O, Schmutz G. La Pseudo-Obstruction Colique Aigue ou Syndrome d'Ogilvie: Un diagnostic radiologique. :45.
- Conner S, Nasserredin A, Mitchell C. Ogilvie Syndrome. In: *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 [cited 2021 Jan 21]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK526102/>
- Choi JS, Lim JS, Kim H, Choi J-Y, Kim M-J, Kim NK, et al. Colonic Pseudoobstruction:CT Findings. *Am J Roentgenol*. 2008 Jun 1;190(6):1521–6.
- Nadukkandiyil N, Alhamad HK, Wahab LA, Al Sulaiti EM, Sankaranarayanan A. Acute intestinal pseudo-obstruction (Ogilvie's syndrome): A case report. *J Clin Gerontol Geriatr*. 2014 Dec 1;5(4):140–2.