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Case report

Occlusive syndrome in intestinal cystic pneumatosis, medical treatment or surgery

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Abstract

Intestinal cystic pneumatosis is a rare pathology, its causes still not clearly established, occlusive syndrome is not common manifestation of this pathology. Computed tomography led to diagnosis. The treatment is principally medical, containing symptomatic measures, for the majority of cases; surgical abord is reserved for complicated cases.

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Introduction

Intestinal cystic pneumatosis is a rare pathology, its causes still not clearly established, occlusive syndrome is not common manifestation of this pathology. Computed tomography led to diagnosis. The treatment is principally medical, containing symptomatic measures, for the majority of cases; surgical abord is reserved for complicated cases.

Patient and observation

Observation 1: a 43 years old man with abdominal trauma a week ago presented for vomiting with abdominal distension and stopping of materials and gases (SMG) for 3 days. Examination found abdominal distention, generalized abdominal pain, leukocytosis at 20.103 elements/mm^3, a correct ionogram, the standard abdominal X rays: small bowel hydroaeric levels (HAL), abdominal computed tomography(CT): huge hail distention and cystic formations suggestive of parietal pneumatosis (Figure 1). The patient benefited from the establishment of a nasogastric tube (NGT) with medical treatment (metronidazole and anti-spasmodic) In front of the exacerbation of clinical signs and the onset of fever, the patient was operated on. Surgical exploration found a hailic distension with diffuse hail pneumatosis (Figure 2). The gesture consisted in an enterovidange of the healthy small bowel segment with pneumatose bleb biopsies. The operative follow-ups were simple. The pathological examination concluded to ICP.

Obervation 2: a 40 years old woman followed for gastric ulcer with Helicobacter pylori + under treatment and in gynecology for infertility with irregular menstrual cycles. She was admitted to the emergency department for generalized abdominal pain with SMG for 2 days, preceded by episodes of diarrhea and vomiting, in a context of fever at 38°C. The clinical examination found abdominal distention with generalized sensitivity, leukocytosis at 17.103 elements/mm^3, CRP at 170 mg/l; abdominal X rays has objectified small bowel HAL; abdominal ultrasound: peritoneal effusion slide with multi-cystic ovaries. Abdominal CT: small bowel distention without obvious obstacle with multiple cystic formations at the level of the intestinal wall and diffuse localization realizing a grape bunch appearance evoking ICP (Figure 3). The treatment consisted in a conditioning of the patient with implementation of NGT. Treatment with C3G antibiotics and metronidazole was instituted in addition to antispasmodic and antipyretic. The evolution was marked by the resumption of transit and the disappearance of the fever at the end of 24h. The patient was declared outgoing on D3 of hospitalization.

Discussion

The ICP affects the man between 40 and 50 years and is secondary to other pathologies: chronic inflammatory bowel disease, gastroduodenal ulcer [1], pulmonary diseases and auto-immune pathlogies such as scleroderma and dermatomyositis [2,3]. Taking certain medications such as alpha-glucosidase inhibitors, anti-psychotics, chemotherapy and occupational exposure to trichlorethylene. The mechanism of formation of gaseous cysts is multifactorial: loss of mucosal integrity, elevation of endoluminal pressure, changes in bacterial flora and hyperproduction of intestinal gas [4]. ICP is usually paucisymptomatic, revealed by nonspecific signs in 30% of cases such as diarrhea, bloody or glairy stools, meteorism, vomiting, constipation and tenesmus. Intestinal obstruction is a rare complication related to the number and size of cysts that can reduce the intestinal lumen and lead to occlusive syndrome. Other complications related to cystic volume have been described: volvulus, , perforation and haemorrhage [5]. Computed tomography has a good diagnostic accuracy. It reveals images of gaseous intussusception density in the digestive wall, better visible in

the lung window [6]. The association with asymptomatic pneumoperitoneum is almost pathognomonic [7]. An important diagnostic criterion to rule out acute intestinal pneumatosis is the absence of an airport for CT [8]. Endoscopic examinations confirm submucosal cysts. To properly manage patients; treatment of benign ICP is medical, surgical treatment is for complications [9], It is a risk-benefit decision [10]. In the first case, the patient is operated on the exacerbation of clinical symptomatology, the onset of fever and severity of the occlusive syndrome, unlike and given the clinical improvement, the second case was treated medically.

Conclusion

Intestinal cystic penumatosis is a rare condition, often asymptomatic. It is a rare cause of bowel obstruction, whose diagnosis is based on CT; surgical treatment is reserved for complicated forms.

Competing interests

The authors declare no competing interests.

Authors' contributions

All the authors have read and agreed to the final manuscript.

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To the co-authors: professors and doctors.

Figures

Figure 1: patient 1, huge hail distention and cystic formations suggestive of parietal pneumatosis

Figure 2: diffuse cystic pneumatosis

Figure 3: patient 2, multiple cystic formations at the level of the intestinal wall and diffuse localization realizing a grape bunch appearance evoking ICP

References

1. El Matiallah MA, El Bouhaddouti H, Mouaqit O, Benjelloun EB, Ousadden A, Taleb KA. Pneumatose kystique intestinale révélée par une sténose d´une anastomose gastro-jéjunale: à propos d´un cas. Pan Afr Med J. 2013;15:125. **PubMed | Google Scholar**

2. Serraj I, Kihal L, Mohcine R, Essaid A. Pneumatose kystique intestinale avec ascite: association exceptionnelle. Acta Endoscopica. 2006;36:357-362. **Google Scholar**

3. Devgun P, Hassan H. Pneumatosis cystoides intestinalis: a rare benign cause of pneumoperitoneum. Case Reports in Radiology. 2013;2013:353245. **PubMed | Google Scholar**

4. Rivera Vaquerizo PA, Caramuto Martins A, Lorente García MA, Blasco Colmenarejo M, Pérez Flores R. Pneumatosis cystoides intestinalis. Revista española de enfermedades digestivas: organo oficial de la Sociedad Española de Patología Digestiva. 2006 Dec;98(12):959-61. **PubMed | Google Scholar**

5. Lê P, Benazzouz A, Fritsch L. Une pneumatose kystique colique révélée par un syndrome pseudo-occlusif. 2003 Mar;128(2):117-20. **PubMed | Google Scholar**

6. Kâ O, Dieng M, Cissé M, Diop B, Ba PA, Dia A et al. Pneumatosis cystoides intestinalis of small bowel and cholecysto-duodenal fistula in stenosing peptic ulcer revealed by pneumoperitoneum. The Internet Journal of Surgery. 2009;22(1).

7. Goel A, Tiwari B, Kujur S, Ganguly PK. Pneumatosis cystoides intestinalis. Surgery. 2005;137(6):659-660. **PubMed | Google Scholar**

8. Kacem HH, Kharrasse G, El Harroudi T. Cause rare du syndrome occlusif: la pneumatose kystique intestinale. Pan Afr Med J. 2014;19:230. **PubMed | Google Scholar**

9. Di Pietropaolo M, Trinci M, Giangregorio C, Galluzzo M, Miele V. Pneumatosis cystoides intestinalis: case report and review of literature. Clin J Gastroenterol. 2020 Feb;13(1):31-36. **PubMed | Google Scholar**

10. Tseng S-M, Li C, Ho C-M. Pneumatosis cystoides intestinalis: not uncommon cause of free air in acute abdomen. Journal of Visceral Surgery. 2019;156(2):177-178. **PubMed | Google Scholar**

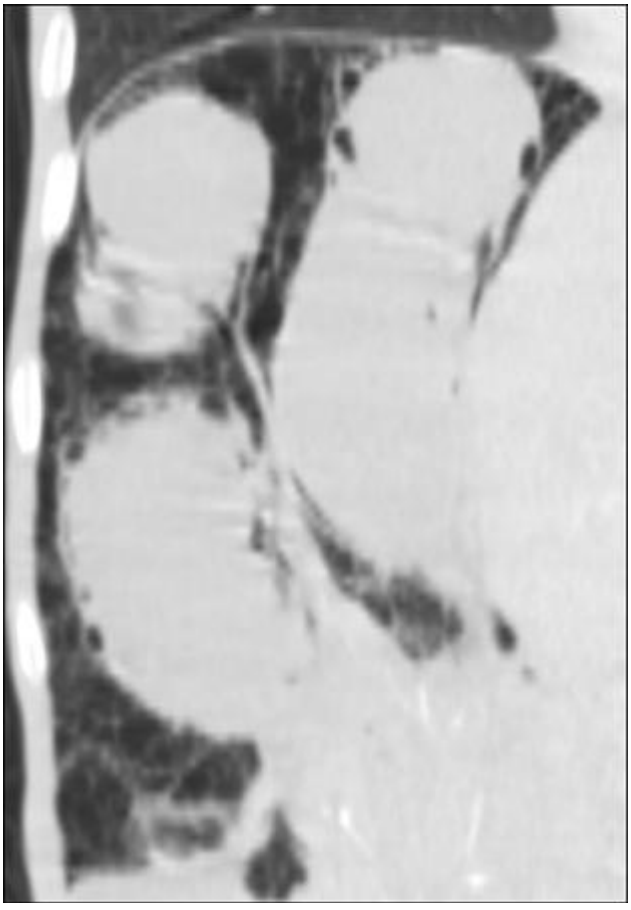

Figure 1: patient 1, huge hail distention and cystic formations suggestive of parietal pneumatosis

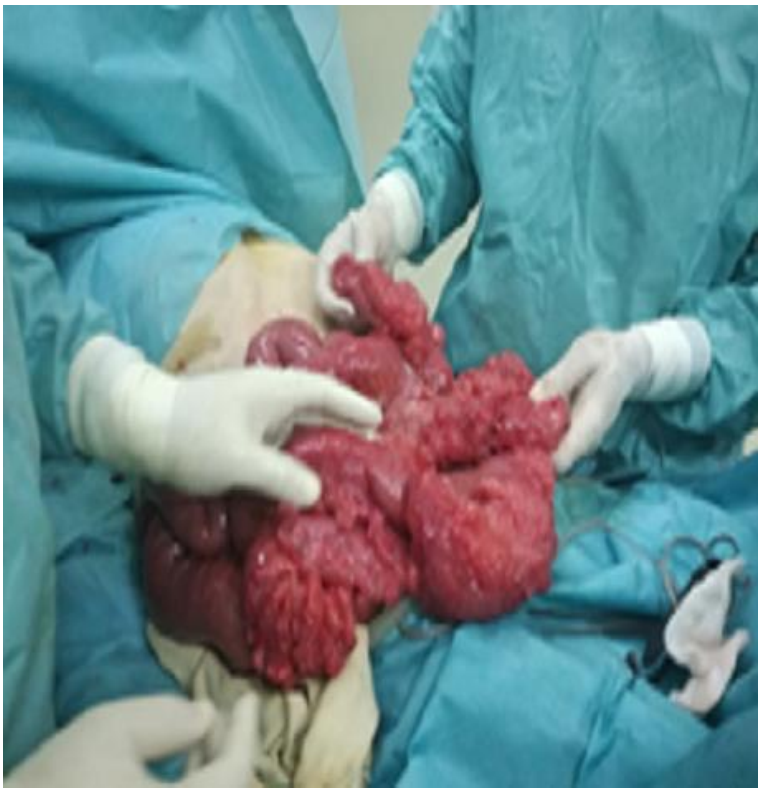

Figure 2: diffuse cystic pneumatosis

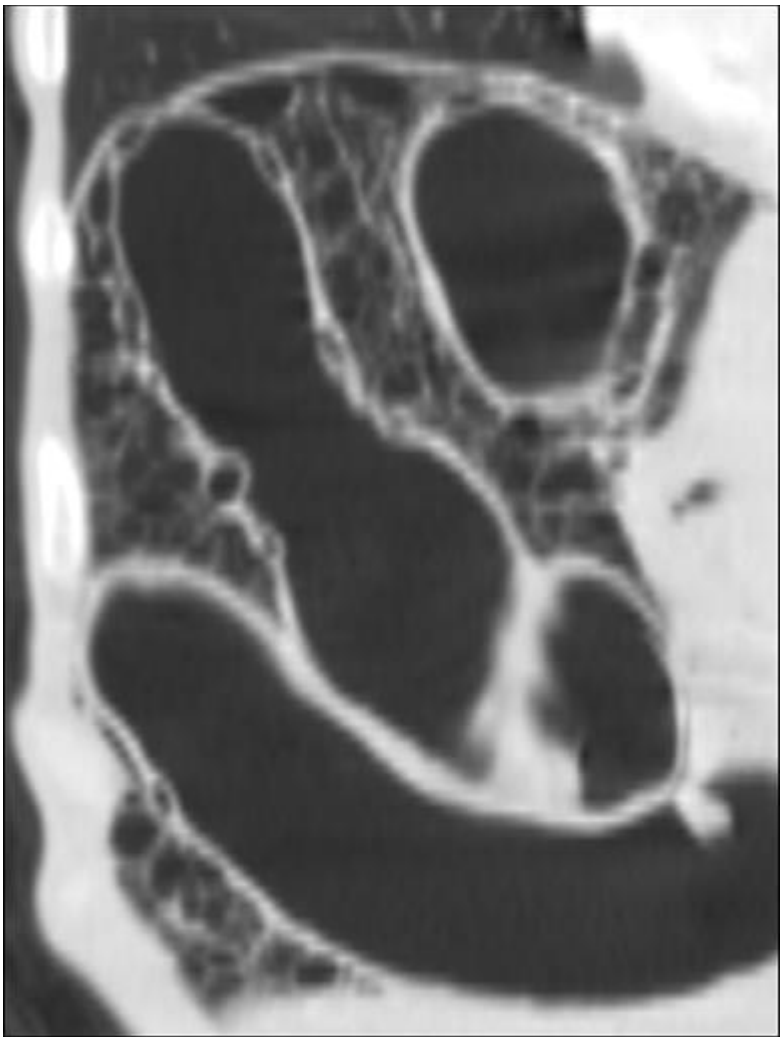

Figure 3: patient 2, multiple cystic formations at the level of the intestinal wall and diffuse localization realizing a grape bunch appearance evoking ICP