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Images of Interest / Imagens de Interesse

Stomach Herniation Through an Inguinal Hernia: A Rare Case

Herniação do Estômago Através de Hérnia Inguinal: Um Caso Raro

Marta Vaz Dias[1], Helena Martins Gomes[1], João Rodrigues Monteiro[1], Beatriz Marques Silva[1], Catarina do Vale Gonçalves[1], Daniel Cardoso[1]

[1]Radiology Department, Centro Hospitalar Tondela-Viseu, Viseu, Portugal

Address

Marta Vaz Dias
Serviço de Radiologia
Hospital de São Teotónio
Av. Rei Dom Duarte
3504-509 Viseu, Portugal
e-mail: martaisavaz@gmail.com

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Abstract

Gastric obstruction in the setting of an inguinal hernia is extremely rare. However, this entity entails a high morbimortality and, therefore, should be easily recognized by the radiologist, allowing a prompt treatment.
This article describes a 70-year-old man, with a history of intense and generalized abdominal pain, vomiting and constipation. On physical examination a voluminous inguinoscrotal hernia and a flat, non-compressible and tender abdomen, were identified.
In this context, a tangential abdominal radiography was performed and a gas level on the non-dependent portion of the abdomen was identified, that raised the suspicion of pneumoperitoneum. A CT was obtained and a right-sided, voluminous inguinoscrotal hernia was observed. This hernia contained intestinal loops and the markedly distended stomach.

Keywords

Inguinal hernia; Stomach; Gastric outlet obstruction; CT.

Resumo

Uma obstrução gástrica no contexto de hérnia inguinal é uma entidade extremamente rara, mas que acarreta uma elevada morbimortalidade e, portanto, deverá ser rapidamente reconhecida pelo radiologista, permitindo um tratamento precoce.
Este artigo descreve um paciente de 70 anos, do sexo masculino com história de dor abdominal generalizada e intensa, vómitos e obstipação. Ao exame físico o doente apresentava uma volumosa hérnia inguino-escrotal direita, bem como um abdómen plano, não depressível e com defesa generalizada.
Neste contexto realizou uma radiografia abdominal com raios tangenciais onde se observou um nível aéreo na porção não dependente do abdómen, tendo levantado a suspeita de pneumoperitoneu. Realizou TC onde se identificou uma volumosa hérnia inguino-escrotal direita, contendo ansas intestinais, bem como a porção inferior do estômago, que se encontrava marcadamente distendido.

Palavras-chave

Hérnia inguinal; Estômago; Obstrução; TC.

Case Report

We present a case of a 70-year-old man with a history of generalized and intense abdominal pain, vomiting and constipation. On physical examination a right, voluminous inguinoscrotal hernia was identified. A flat, non-compressible and non-tender abdomen was present.
A tangential abdominal radiography was obtained, in this context, and a gas level on the non-dependent portion of the abdomen was identified (Figure 1). This finding raised the suspicion of pneumoperitoneum and, therefore, a CT was performed. On CT, a markedly distended stomach, as well as a distended oesophagus and free abdominal fluid were identified, implying an obstructive event (Figure 2). The inferior portion of the stomach and some intestinal loops were contained on the right inguinoscrotal hernia, making this the most probable cause for the obstruction (Figure 3).
This patient had a poor prognosis. Therefore, a nasogastric tube was inserted, and other comfort measures were taken. The patient died within the following hours.

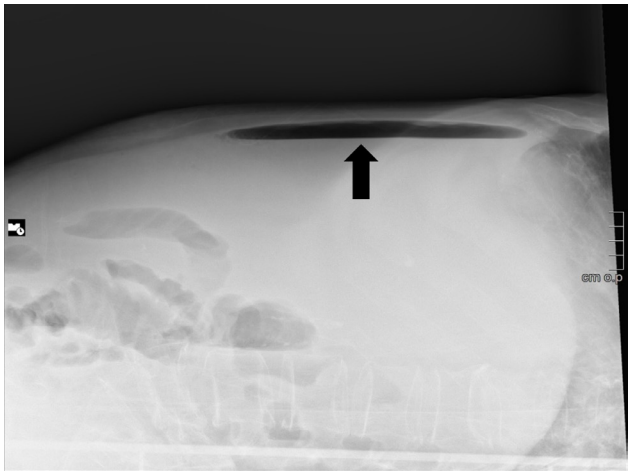

Figure 1 – Tangential abdominal radiograph showing an air-fluid level, that corresponded to gastric bubble (black arrow).

Discussion

Inguinal hernia is the commonest type of abdominal wall hernia and occurs above the inguinal ligament and through the inguinal canal.[1] This type of hernias affects more commonly men and the majority of them are acquired. Patients often refer swelling and pain in the groin area.[2] The main risk factor for hernia formation is an increased intra-abdominal pressure, that can overload the protective shutter mechanism of the inguinal canal, leading to internal ring widening.[1]
These hernias may contain several visceral organs, with omentum or bowel being the most commonly found.[1]

Figure 2 – Marked gastric (*) and oesophageal distension (#), implying an obstructive event.

Figure 3 – Marked gastric distension, with inferior part of gastric body herniated through inguinal hernia, and with transition point at the level of pylorus (A, white arrow). Free abdominal fluid is also present (A, *).

Strangulation in the setting of an inguinal hernia is uncommon but holds considerable mortality.[1] Strangulation results from trapping of hernia contents, leading to reduced venous and lymphatic flow, and eventually reduced arterial flow, causing ischemia and necrosis of the herniated organs.[2] As seen in this case, complicated inguinal hernias commonly present with pain and symptoms of intestinal obstruction.[2]

Very few cases have been reported of inguinal hernias containing stomach, with the most cases occurring before 1980.[2] In this particular case, the inguinal hernia was causing a massive gastric distention (Figure 2), indicating a gastric obstruction outlet, impeding gastric emptying. It is thought that long-standing traction of the greater omentum in the context of a long-standing hernia may draw the stomach into the hernial sac. Chronic obstructive pulmonary disease was also suggested as a part of the pathogenesis of gastric herniation although very little direct evidence was found to support this theory.[1]

In conclusion, most inguinal hernias are asymptomatic. However, in the case of symptomatic ones, early and elective treatment, can drastically reduce the complications. When left untreated, hernias can grow in size and contents, increasing the risk of complications, as seen in this case.

Ethical Disclosures / Divulgações Éticas

Conflicts of interest: The authors have no conflicts of interest to declare.

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Protection of human and animal subjects: The authors declare that the procedures followed were in accordance with the regulations of the relevant clinical research ethics committee and with those of the Code of Ethics of the World Medical Association (Declaration of Helsinki).

Protecção de pessoas e animais: Os autores declaram que os procedimentos seguidos estavam de acordo com os regulamentos estabelecidos pelos responsáveis da Comissão de Investigação Clínica e Ética e de acordo com a Declaração de Helsínquia da Associação Médica Mundial.

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