

Acute diverticulitis complicated with fistulation to psoas muscle and abscess formation. A case report

Diverticulitis aguda complicada con fístula al músculo psoas y formación de absceso. Presentación de un caso

Ana María Gómez Bolívar[1]
Vilmar Javier Castilla Muñoz[1]
Víctor Nebil Larrañaga[2]
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Summary

Acute diverticulitis (AD) is a common condition predominantly affecting the adult population. It can be complicated by abscess formation in 30% of cases or the development of a fistula in up to 14% of cases; involvement of the psoas muscle is rare. This report presents the case of a young patient in whom a fistulous tract between the colon and the psoas muscle was identified, along with abscess formation as a consequence of an episode of AD. A review of the available literature was conducted, highlighting the importance of computed tomography (CT) in the evaluation of this condition and its various complications.

Resumen

La diverticulitis aguda (DA) es una entidad común predominantemente en la población adulta. Se puede complicar con absceso en un 30 % de los casos o con el desarrollo de una fístula hasta en un 14 % de los casos; la afectación del músculo psoas es poco frecuente. En este trabajo se presenta el caso de un paciente joven en quien se identificó un trayecto fistuloso entre el colon y el músculo psoas con formación de absceso, como consecuencia de un cuadro de DA. Se revisó la literatura disponible, en la que se destaca la importancia de la tomografía axial computarizada (TAC) en la evaluación de esta entidad y sus diferentes complicaciones.

Clinical case

The patient is a 34-year-old man with a history of uncomplicated diverticular disease, whose last episode occurred one year ago. He came to the emergency room with a clinical picture of 24 hours of evolution characterized by pain in the left iliac fossa (LIF) and a temperature of 37.5 °C. Physical examination revealed pain on palpation in the referred area, without muscular defense. Laboratory data showed leukocytosis of 14,360 mm3 with neutrophilia of 77.6%.

Multidetector computed tomography (MDCT) of the abdomen and pelvis with intravenous contrast medium (IVC) was performed on suspicion of acute complicated diverticulitis (Figures 1, 2 and 3).

The patient was taken to surgery, during which a large inflammatory mass was found in the left colon, with evidence of a fistulous tract between the descending and sigmoid colon and the psoas muscle. Fistulectomy with abscess drainage, left colectomy and endolateral anastomosis were performed. The patient evolves favorably.

Discussion

Colonic diverticulosis is a common entity in the general population, and its incidence increases with age at a rate of 5% at 40 years of age, 30% at 60 years of age and 50-80% at 80 years of age. About 25% of patients diagnosed with diverticulosis will develop acute diverticulitis (AD), and it is the youngest patients who will have the highest recurrence. This entity represents 3.8% of the causes of ED visits for acute abdominal pain (1).

AD results from inflammation of the evaginations of the intestinal wall as a consequence of obstruction of the diverticular ostium by a fecalith, with subsequent inflammation (uncomplicated diverticulitis). About 25% of these patients will develop complications such as abscess, phlegmon, fistula, stenosis, obstruction, hemorrhage or perforation (complicated diverticulitis) (1, 2).

The general clinical presentation of this entity is given by pain in LIF, fever, changes in the intestinal habitus and leukocytosis in the hemogram. It can also be associated with lumbar pain, palpable mass in the flank or inguinal region, in the presence of a psoas abscess and/or inflammatory phlegmon (3).

[1]Diagnostic Imaging Resident.

[2]Physician, specialist in Diagnostic Imaging.

Department of Diagnostic Imaging Medical Education and Clinical Research Center (CEMIC). Buenos Aires, Argentina.



Figure 1. Abdominal CT with intravenous and oral contrast medium, sagittal reconstruction. Mural thickening of the sigmoid colon (yellow arrow) secondary to diverticular inflammatory changes. A fistulous tract (red arrow) communicating the involved colon and an inflammatory collection in the left psoas muscle (green arrow) are identified.



Figure 2. Abdominal CT with intravenous and oral contrast medium, axial view. Mural thickening of the sigmoid colon (yellow arrow). Liquid collection with peripheral enhancement and air bubbles in the left psoas muscle (green arrow), compatible with abscess. Fistulous tract is identified between the inflamed colon and this collection (red arrow), associated with inflammatory changes of the adjacent fat.



Figure 3. Abdominal CT with intravenous and oral contrast medium, coronal reconstruction. Colonic and pericolonic inflammatory changes (yellow arrow), associated with liquid collection with heterogeneous enhancement and air bubbles (green arrow).

Ultrasound, as an important part of the initial evaluation of abdominal pain, can demonstrate a non-compressible diverticulum with hypoechoic mural thickening of the colon and inflammatory changes of the adjacent fat; however, its sensitivity and specificity are low, and it is operator-dependent. CT represents the diagnostic method of choice for AD and its local and distant complications (1).

The development of an abscess associated with AD has been described in 30% of cases. Specifically, abscess of the psoas muscle is rare and occurs by contiguity/fistulization with the initial inflammatory process, as in the case described. Typical imaging findings will be loss of iliopsoas muscle contour or the presence of gas in the retroperitoneal space (3, 4).

On the other hand, the complication with fistula (inflammatory trajectory that communicates two organs or epithelial structures) associated with AD can occur in up to 14% of cases, and occurs as a consequence of the loss of integrity of the structures neighboring the diverticular abscess; the most frequent locations are colovesical, choloenteric and colouterine. According to its trajectory and communication, it manifests with different symptoms, generally insidious. The definitive diagnosis will be made by visualization of the fistulous tract, either by tomography, fistulography or during surgery (5).

The Hinchey classification based on radiological and intraoperative findings of patients with AD is useful to determine the severity of the condition, as described below: phlegmon (stage Ia), localized abscess (stages Ib and II), free perforation with purulent peritonitis (stage III), or with fecal peritonitis (stage IV) (1, 2).

In the present case, the imaging and surgical findings correspond to Hinchey II AD, associated with fistula and abscess formation of the psoas muscle, as a complication in a young patient with a history of diverticulosis and previous episodes of AD.

Conclusion

AD is one of the frequent causes of consultation in emergency departments for abdominal pain; however, its complications manifest themselves in an insidious manner, which represents a challenge for surgeons and imaging specialists, since they involve severe pictures of high morbidity and mortality, which require early multidisciplinary management.

Although MDCT is the study of choice for the evaluation of AD and its possible complications, imaging specialists should be familiar with ultrasound findings, since it is still the initial study for the approach to abdominal pain and can provide relevant information.

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Correspondence

Ana María Gómez Bolívar
Imaging Department
Hospital Universitario Sede Saavedra Galván 4102,
Capital Federal, Argentina
anamariagomezb9@gmail.com

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