

CASE PRESENTATION

A 24 year-old female is submitted to the emergency room referring acute abdominal pain in the lower right quadrant.

Patient refers no fever. On exploration the patient has pain on deep palpation of the lower left quadrant, no mass effect, no Blumberg sign. A blood analysis is conducted showing a slightly altered white blood cell count (12,300) with no neutrophilia and a RCP of 1.07.

An ultrasound is performed to rule out acute appendicitis. On ultrasound (US) a wall thickening of the lateral wall of the cecum is seen, with small amount of free liquid and hyperechogenicity of the surrounding fat tissue. Appendix and ileum are identified, with normal appearance.

Due to the findings, an enhanced abdominal CT is performed, with the same inflammatory findings on the lateral wall of the cecum. With reconstruction software, a diverticulum shaped lesion can be appreciated. Right sided diverticulitis is diagnosed as most probable cause.

DISCUSSION

Diverticulosis is a frequent disease where multiple diverticula are detected in the colon and sigmoid. If inflammatory changes appear in a diverticulum, diverticulitis is diagnosed. It can be acute or chronic and cause from mild inflammatory changes to perforation and peritonitis.

There are two types of diverticula:

- Congenital: it is a true diverticulum, composed by all the layers of the colonic wall. They are normally isolated and can be seen in younger patients.
- Acquired: these are the pseudodiverticulum, where the mucosa and submucosal layers herniate through the muscularis and are only covered by the serosa. These are the most frequent type of diverticula, appear more frequently in elderly patients and are associated with the diet.

Most of the diverticula in western countries are left sided, and only 2% are rightsided.

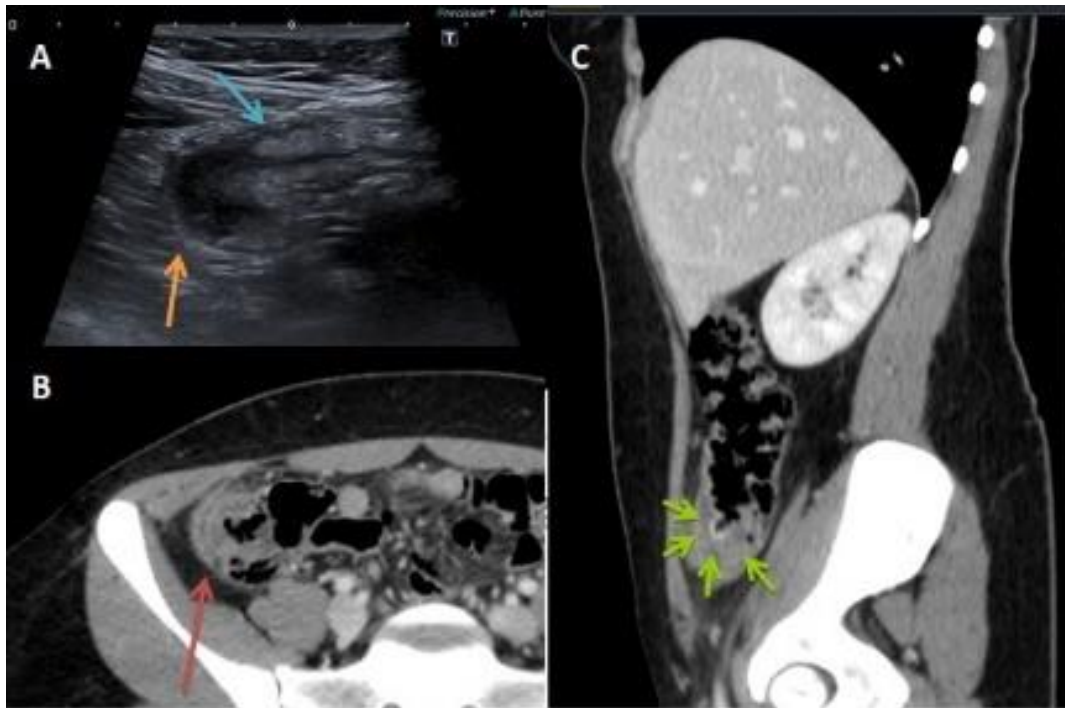
When seeing a diverticulum in the right colon, if it is isolated and in the cecum it is normally congenital meanwhile if there are numerous, they are acquired.

Right sided diverticulitis might be hard to suspect and clinically confused with ileitis or appendicitis. Imaging studies are the key test to differentiate one from the other. Diverticulitis appears as an asymmetrical bowel wall thickening, pericolonic fat infiltration, extra-luminal air or abscess and no/mild signs of inflammatory changes on appendix or ileum due to contiguity.

Treatment depends on the degree of the affection, from antibiotics in patients with mild inflammatory changes to surgery in patients with perforation and peritonitis, obstruction or large abscess.

CONCLUSION

Right diverticulitis is a differential diagnosis of acute appendicitis and should be suspected when there are inflammatory changes in the cecum wall with mild to no changes in the appendix.



A) Ultrasound depicting small amount of echogenic liquid (orange arrow) and hyperechoic fat tissue (blue arrow) in the right lower quadrant.
B) CT axial image shows wall thickening of the cecum (red arrow) with adjacent liquid
C) CT sagittal image shows the diverticulum with a hyperdense wall in the middle of the wall thickening (green arrows)

BIBLIOGRAPHY

- Murphy, T., Hunt, R.H., Fried, M. and Krabshuis, J.H. (2007) Diverticular Disease. WGO Practice Guidelines.(1-16).
- Ghoulam, E., Clarrett, D., Marsicano, E. Diverticulitis. Medscape (2018)