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Ultrasound and computed tomography: epiploic appendagitis

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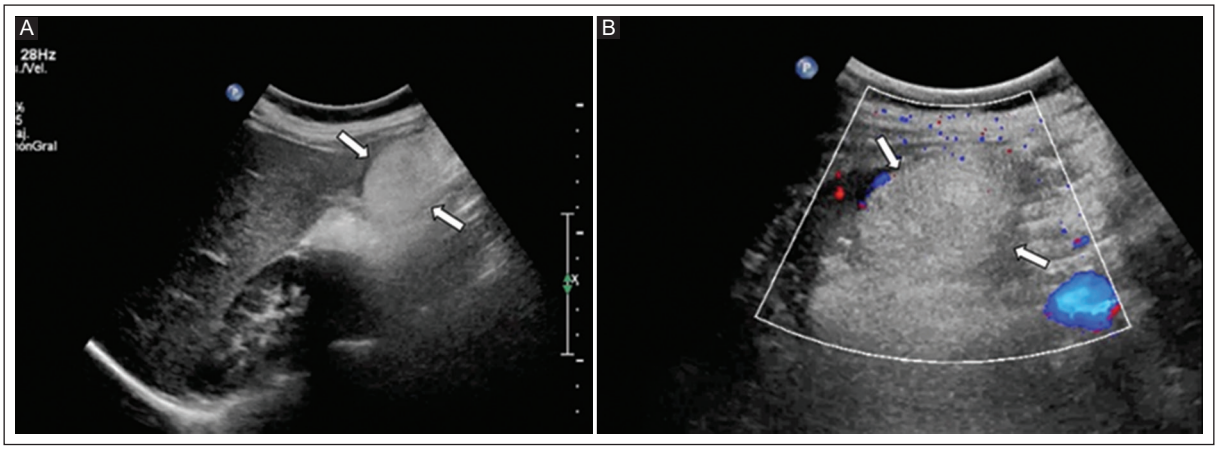

Figure 1. A: gray scale ultrasound shows a solid, ovoid, hyperechoic, non-compressible mass in the hepatorenal fossa with right-sided abdominal pain (white arrows). **B:** magnification of the hepatorenal fossa showing no blood flow with color Doppler ultrasound, suggestive of appendagitis (arrows).

A 10-year-old male patient with a one-day history of right-sided abdominal pain was referred for an abdominal ultrasound because of a clinical suspicion of appendicitis. Ultrasound showed a solid, ovoid, non-compressible mass in the hepatorenal fossa with a hypoechoic rim, obliteration of the adjacent fat planes (Figure 1A, Supplementary video 1), and no flow detected with color Doppler (Figure 1B, Supplementary video 2). Therefore, appendagitis was diagnosed. An enhanced CT, as a complementary study, demonstrated an oval structure with a thin, high-density ring, the "hyperattenuating ring" sign. In addition, a hyperdense central dot and obliteration of the fat planes adjacent to the colon (Figure 2, Supplementary video 3). After 5 days of conservative treatment, the boy was discharged with resolution of his symptoms.

Appendagitis is a rare and benign inflammatory process of vascular etiology due to torsion of the epiploic appendix of the colon or spontaneous venous thrombosis that results in ischemia and necrosis[1,2]. It usually manifests in the fourth to fifth decades of life[3]. Pediatric cases are rare[4]. Imaging tools, such as ultrasound and computed tomography, can be used for diagnosis. The

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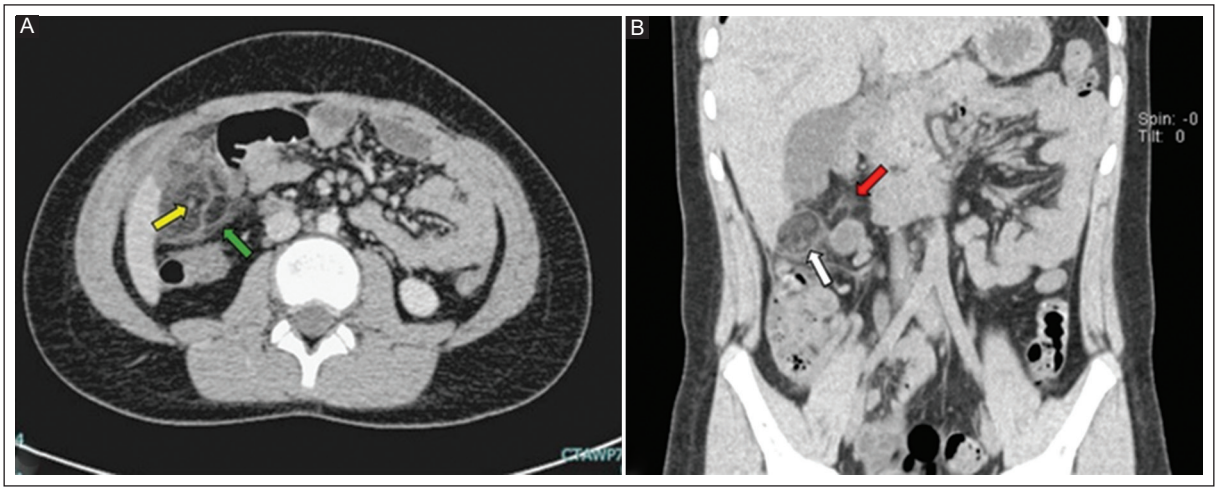

Figure 2. Axial abdominal contrast-enhanced CT. **A:** showing a hyperdense central dot (yellow arrow) associated with inflammation of the epiploic appendix (green arrow). **B:** coronal plane view showing fat tissue obliteration (red arrow) with a peripheral hyperdense area, the "hyperattenuating ring" sign (white arrow).
CT: computed tomography.

importance of this case lies in the characteristic ultrasound images that support the diagnosis of appendagitis.

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Conflicts of Interest

The authors declare that they have no conflicts of interest.

Ethical disclosures

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).

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. Informed consent was not required to analyze and publish routinely acquired clinical data. Similarly, informed consent is not required for the publication of imaging data.

Supplementary material

Supplementary material is available online in the Journal of the Mexican Federation of Radiology and Imaging (www.jmexfri.com).

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