

The hyperdense crescent sign

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The hyperdense or high-attenuation crescent sign describes the presence of a crescent-shaped accumulation of blood within an intraluminal thrombus or the wall of an aortic aneurysm (Fig. 1) [1, 2]. This sign was first described by Mehard et al. and is best seen on unenhanced CT images, but can also be seen on contrast-enhanced images [1]. The acute hematoma appears hyperdense on unenhanced CT images due to the penetration of fresh blood inside the mural thrombus and within the aortic

wall, taking the shape of the French pastry, “le croissant” and resembling a crescent moon (Fig. 2).

This sign is considered a sign of aneurysm instability and “impending” rupture [1, 3]. Detecting the impending signs of rupture (“contained rupture”) is important, as aortic aneurysm rupture has a very high mortality rate with an estimated 15,000 to 30,000 yearly deaths in the United States [4]. This sign differs from the “draped aorta” sign, a sign of contained rupture, where there is loss of the interface between the aortic wall and adjacent structures [5].

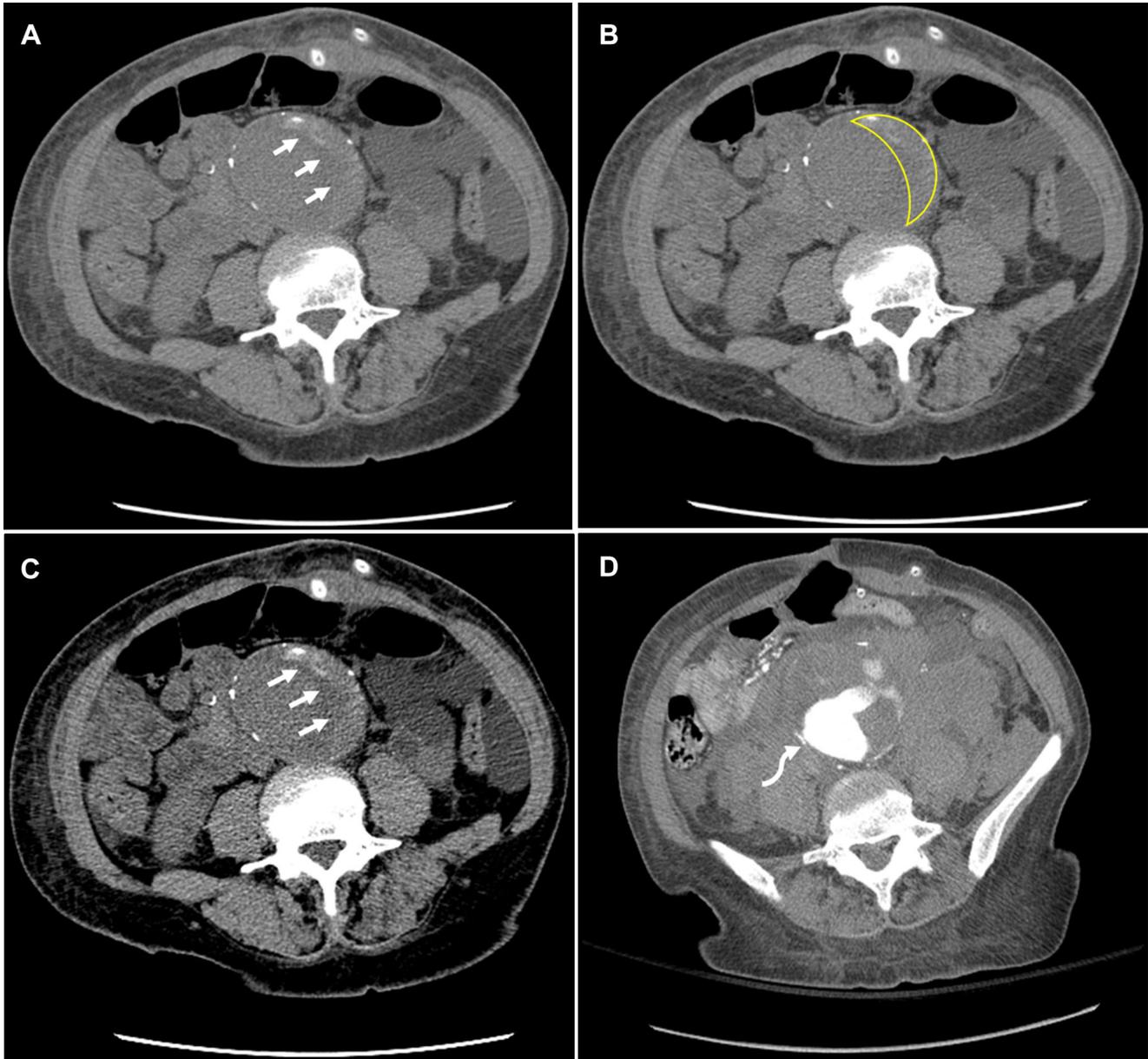


Fig. 1. **A** Unenhanced CT image showing an abdominal aortic aneurysm (AAA) and the hyperdense crescent sign along the anterior and right lateral wall of the abdominal aorta (white arrows). **B** Schematic drawing showing the crescent (same image as **A**). **C** Same image with slightly different windows better illustrating the “crescent” in the aortic wall.

(white arrows). **D** Contrast-enhanced CT image taken 6 days later showing the rupture of the AAA with a large retroperitoneal hematoma, supporting the “impending rupture” importance of the crescent sign as seen on the initial images (white arrow).



Fig. 2. The French popular pastry “le croissant” (the crescent), having a similar shape of a moon crescent
Source: https://commons.wikimedia.org/wiki/Category:Croissant?uselang=fr#/media/File:Croissant_2.jpg.

Compliance with ethical standards

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Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval This article does not contain any studies with human participants or animals performed by any of the authors.

Informed consent Statement of informed consent was not applicable since the manuscript does not contain any patient data.

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