LETTER TO THE EDITOR

Aneurysm of the retrohepatic inferior vena cava

Anévrisme de la veine cave rétrohépatique

KEYWORDS
Inferior vena cava; Aneurysm; Liver

MOTS CLÉS
Veine cave inférieure ; Anévrisme ; Foie

We are reporting the case of a 52-year-old man presented with a 2-month history of non-specific abdominal pain and no other symptoms. An abdominal sonography was performed. Incidentally, an anechoic mass of the liver was detected at the level of the caudate lobe. Axial (Fig. 1A) and longitudinal (Fig. 1B) abdominal sonograms along the right paraumbilical region showed a well-defined anechoic mass (arrow) connected to the retrohepatic inferior vena cava (IVC) (arrowhead). A color Doppler imaging (Fig. 1C) established the vascular nature of the anechoic lesion with a characteristic continuous non-pulsatile venous flow in duplex mode. A complementary abdominal MR angiography was performed and showed a huge saccular aneurysmal dilatation originating from the retrohepatic segment of the IVC (Fig. 2). The patient had no antecedent trauma and no medical history suggestive of venous systemic hypertension. Blood-tests revealed no biological signs of an inflammatory syndrome. No treatment was proposed to the patient. Further serial ultrasound examinations revealed no change in the morphology and in the size of the aneurysm over a period of 3 years. Venous aneurysms are uncommon, and those who involve IVC are extremely rare. In world literature, IVC aneurysms have been reported in less than 30 cases [1]. Although the origin of IVC aneurysms is not fully understood, most of these aneurysms are believed to be congenital or acquired. Acquired aneurysms may be secondary to trauma or disease processes in the affected vessel wall. The natural history of IVC aneurysms is unknown and varies from an incidental finding to a vague painful presentation. IVC aneurysms can be diagnosed by a duplex Doppler sonography, contrast-enhanced multi-detector computed tomography, or magnetic resonance imaging (MRI). Gradman et al. [2] proposed a classification of IVC aneurysms into four types, based on their anatomical and embryological characteristics. In the first three types, the aneurysms are confined either to the infra-renal or suprahepatic portions of the IVC or are associated with interruption of the IVC. The present patient conformed to none of these types and fell into the least common type IV category, which was described as "miscellaneous". To our knowledge, our case is the first report of saccular aneurysm of the retrohepatic portion of IVC. For all symptomatic patients, surgery is indicated in order to manage these aneurysms. Uncomplicated incidental aneurysms do not require intervention and can be managed expectantly with serial non-invasive imaging by abdominal sonography to assess for an increase in size or the development of any complications.

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Figure 1  Axial (A) and longitudinal (B) abdominal sonograms along the right paraumbilical region showing a well-defined anechoic mass (arrow) connected to the retrohepatic inferior vena cava (IVC) (arrowhead). Colour Doppler imaging (C) reveals a characteristic continuous non-pulsatile venous flow.  

Échographie abdominale en coupes axiale (A) et longitudinale (B) montrant une formation anéchogène (flèche) qui semble raccordée à la veine cave inférieure rétrohépatique (tête de flèche). Écho-Doppler pulsé (C) objectivant un flux continu non pulsatile caractéristique d’un flux veineux.

Figure 2  Coronal non-contrast MR venography BTFE (Balanced Turbo Field Echo) showing the lobulated appearance of the venous aneurysm (arrow) and its communication with the retrohepatic inferior vena cava (IVC).

Angio-IRM veineuse sans injection BTFE (Balanced Turbo Field Echo) en coupe coronale montrant l’aspect lobulé de la formation anévrismale veineuse (flèche) et sa communication avec la veine cave inférieure.

Disclosure of interest
The authors declare that they have no conflicts of interest concerning this article.

References

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