LETTER / Gastrointestinal imaging

Spontaneous and simultaneous regression of multiple hepatic haemangiomas: First case reported

A. Guillonnet*, E. Sibileau, S. Benadjoud, A. Tavano, C. Rousseau, M. Zins

Service de radiologie, hôpital Saint-Joseph, 142, rue Raymond-Losserand, 75014 Paris, France

Benign and asymptomatic, the haemangioma is the most common liver tumour. In the general population, the prevalence is between 1–2% and 20% [1]. Its characteristics are well known in imaging (ultrasound, CT scan and MRI) and, when present, never require a histological verification. It may have unusual aspects such as the giant haemangioma with central cystic degeneration, the rapidly filling haemangioma or calcification [1]. Less frequent, hyalinised haemangiomas (as well as sclerotic or sclerosing haemangiomas) may represent the ultimate stage in the involution of haemangiomas. They are most often isolated and associated with a reduction in size [2]. This article presents a case of multiple haemangiomas where the size and radiological semiology are simultaneously modified.

Case report

In 2008, a 47-year-old woman, without any noteworthy antecedents except for mood disorders treated with aripiprazole (Abilify®) and lithium carbonate (Teralithe®), consulted for abdominal pain without fever. The liver assessment was normal, the serologies for hepatitis A, B and C were negative. An ultrasound examination revealed the presence of three hyperechogenic focal hepatic lesions with posterior reinforcement: two lesions under 4 cm in size, compatible with typical haemangiomas and one 10 cm lesion, compatible with a giant haemangioma.

The MRI carried out immediately detected three formations. The semiology was typical of haemangiomas: well limited, in T1 hypointensity, fluid T2 hyperintensity, with enhancement in discontinuous peripheral lumps at arterial time, followed by progressive filling. A histological sample was not taken due to the presence of several typical haemangiomas in an asymptomatic patient.

In June 2009, a second liver MRI without contrast injection was carried out and revealed the three lesions in typical T2 signal hyperintensity (Fig. 1).

* Corresponding author.
E-mail address: antoineguillonnet@gmail.com (A. Guillonnet).

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Figure 1. MRI in 2009: T2 sequence: a: lesion A: a giant haemangioma of the right liver, cystic centre, measuring 94 × 104 mm; b: lesion B: a haemangioma of the hepatic dome measuring 32 × 36 mm; c: lesion C: a small sub-capsular haemangioma of the left liver measuring 21 × 12 mm (arrow).

In November 2011, a third liver MRI (Fig. 2) revealed a change in the aspect of the haemangiomas (Table 1): reduction in the size of all of the lesions (up to −41% between 2009 and 2011), modification of the T2 signal intensity and disappearance of the typical enhancement kinetics for the giant haemangioma.

In view of the typical appearance of the haemangiomas in the first MRI and since there is no risk of degeneration of the haemangiomas [1], a biopsy for aetiological purposes was not taken in this asymptomatic patient. After 12 months, the patient is still asymptomatic.

**Discussion**

In general, haemangiomas do not increase in size over time [1,2]. Several cases have been reported of haemangiomas with a significant increase in size, generally within

<table>
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<th>Table 1</th>
<th>Characteristics of three lesions in the 2011 and 2009 MRI.</th>
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<td>Lesion</td>
<td>Size in 2009 (mm)</td>
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<tr>
<td>---------</td>
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</tr>
<tr>
<td>A</td>
<td>104 × 94</td>
</tr>
<tr>
<td>B</td>
<td>36 × 33</td>
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<tr>
<td>C</td>
<td>22 × 12</td>
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Figure 2. MRI in 2011: sequences T2, and T1 after gadolinium injection (portal time): a, b: lesion A: reduction in size (75 × 72 mm), heterogeneous T2 signal intensity, incomplete and heterogeneous enhancement; c, d: lesion B: reduction in size (25 × 18 mm), weaker T2 signal hyperintensity than in 2009, typical enhancement of a haemangioma, here in peripheral clumps; e, f: lesion C (arrows): reduction in size (13 × 9 mm), T2 hyperintensity, typical enhancement of a haemangioma with homogenisation at portal time (haemangioma not visible).

a specific hormonal context (pregnancy, estroprogestative contraception) [1,3]. Among the rare cases reported of a decrease in the size of haemangiomas, two of them describe the reduction in the size of a single haemangioma after treatment (VEGF inhibitor [4], chemotherapy [5]), and Doyle reported the reduction in the size of haemangiomas after sclerotic transformation without specifying if this phenomenon is secondary or spontaneous [2]. Other benign liver lesions are likely to regress over time: nodular and focal hyperplasia, without the determination of a formal cause for the reduction in size in the cases reported [6,7]; the haemangioma may decrease or even disappear after the
Discussion of interest

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

References


Conclusion

The regression in the size of haemangiomas is rare and no cases of the spontaneous and simultaneous reduction in the size of several haemangiomas have been described in the same patient. This exceptional case report indicates that factors are likely to trigger or influence this phenomenon.