

## Letters to the Editor

### MR Diffusion in Elastofibroma Dorsi<sup>☆</sup>

#### *Imágenes de resonancia magnética ponderadas en difusión en el elastofibroma dorsi*

Dear Editor:

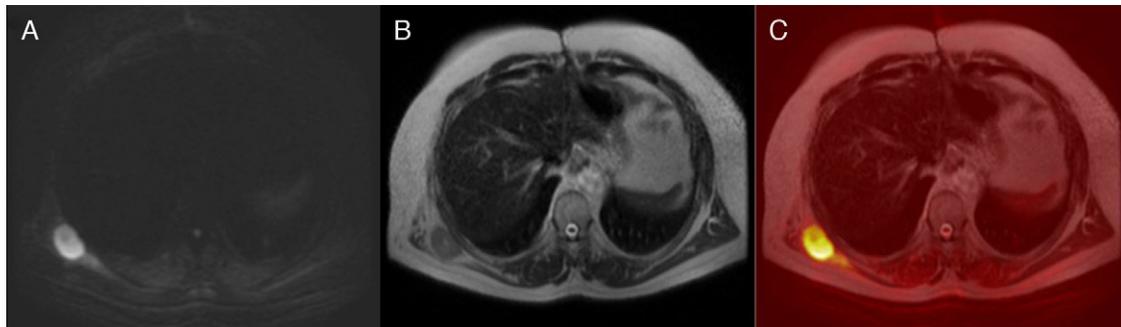
We would like to congratulate Dr. Ramos et al.<sup>1</sup> for their interesting description of elastofibroma dorsi (ED). In their study, these authors concluded that this entity is a tumor of the chest wall that is not sufficiently diagnosed, whose influence is uncertain and whose surgical resection is only indicated in symptomatic patients. We would like to provide and describe our experience with a similar case, including the findings of the magnetic resonance, giving special attention to the diffusion-weighted images.

Elastofibroma is a benign fibroblastic tumor that is almost always located in the lower subscapular region between the scapula and the chest wall. This type of tumor has been detected by coincidence in up to 2% of senior patients by means of computed tomography (CT).<sup>2</sup> ED is a recognized process in published anatomopathologic studies and has been receiving attention in recently-published radiological studies because captation of fluorodeoxyglucose (FDG) is frequently observed in these tumors with positron emission tomography (PET)/CT.<sup>3–5</sup> We report a case of ED in which magnetic resonance (MR) showed intense diffusion restriction, which should not be mistakenly interpreted as the anomalous restriction that is observed in malignant lesions.

The patient is a 41-year-old woman with diagnosis of thymic carcinoma, treated with chemotherapy and radiotherapy. Chest CT

showed an anterior mediastinal mass that did not modify after treatment. Later, the patient underwent thoracic MR that showed no signs of activity of the mediastinal mass with either contrast or diffusion restriction. Another mass was observed, however, in the right lower subscapular region between the scapula and the chest wall. The mass was associated with a low intensity signal in T1 and T2 and a moderately heterogeneous and intense restriction in the diffusion-weighted sequences (Fig. 1). The mass was stable when compared with previous exams. The histopathologic exam demonstrated striations of fatty tissue that alternated with fibrous tissue. The hypertrophic fibrous tissue contained fibrillar material with staining identical to the necrotic fibrous tissue, muscle and fat. These findings were compatible with ED.

Recently, published clinical cases have documented the coincidental detection of an ED with PET/CT. In these cases, mild or moderate captation of FDG was frequently observed, which should not be mistakenly interpreted as the anomalous accumulation of malignant lesions.<sup>3–5</sup> Diffusion-weighted MR was also used to evaluate the malignant lesions but, to date, no findings of ED have been described with these sequences. Diffusion-weighted MR images provide functional information (meaning the diffusivity of water molecules) and can highlight high cellularity lesions throughout the body. Diffusion-weighted sequences can be a powerful addition to anatomical MR, detecting subtle lesions and pathological changes in structures in normal size, while reducing the time for interpretation of the images.<sup>6</sup> In conclusion, we have observed diffusion restriction on MR in a patient with ED, which could be associated with the inflammatory process of this benign lesion. This finding should not be mistakenly diagnosed as a malignant tumor.



**Fig. 1.** (A) Diffusion-weighted sequence ( $b$  value = 600) showing a mass with intense restriction in the right lower subscapular region between the scapula and the chest wall. (B) The mass is characterized by a moderately heterogeneous isointense signal in T2. (C) The fusion of the diffusion-weighted sequence in T2 demonstrates more clearly the intense restriction in the mass.

<sup>☆</sup> Please cite this article as: Hochegger B, et al. Imágenes de resonancia magnética ponderadas en difusión en el elastofibroma dorsi. Arch Bronconeumol. 2011; 47:535–6.

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## Elastofibroma Dorsi: An Uncommon and Under-Diagnosed Tumour. The Authors' Response<sup>☆</sup>

### Fibroelastoma dorsi: un tumor infrecuente e infradiagnosticado. Réplica de los autores

We would like to thank the authors for their interest in and comments regarding our contribution about elastofibroma dorsi (ED).<sup>1</sup> We find interesting the use of new techniques or complementary explorations that can aid in the differential diagnosis of these lesions. Magnetic resonance (MR) is the ideal technique with the best diagnostic accuracy for ED.<sup>2</sup>

As we postulate in our study, we believe that MR should be done if the physical examination and the ultrasound study do not

clearly direct the diagnosis; nevertheless, more specific studies will provide greater functional and morphological information than the rest of complementary explorations.

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## Bilateral Elastofibroma dorsi: a Very Rare Presentation for a Rare Pathology<sup>☆</sup>

### Elastofibroma dorsi bilateral: una muy rara presentación para una rara patología

To the Editor:

Elastofibroma dorsi (ED) is an uncommon, non-encapsulated, non-benign tumor characterized by the proliferation of elastin fibers in a stroma of collagen and fatty connective tissue.<sup>1</sup> It is typically seen in people over the age of 60<sup>2</sup> and in women, with a male to female ratio of 13:1.<sup>3</sup> We report two cases of a rare presentation for this type of pathology.

The first case is a 57-year-old symptomatic woman, with right elastofibroma measuring 5 cm × 4 cm that was satisfactorily removed surgically. Two years later, the patient presented a new mass measuring 2.3 cm × 2.3 cm, although without symptoms,

which was extirpated. The second case is that of a 51-year-old man presenting bilateral subscapular masses. They were resected sequentially. Both in the first as well as in the second case, the anatomopathologic results were elastofibroma.

Although the estimated prevalence of ED is 2%<sup>2</sup> in asymptomatic patients, in series of autopsies individuals over the age of 50 seem to present a prevalence of subclinical ED (<3 cm) reaching 24% in women and 11% in men.<sup>1</sup> In practice, within the exceptional nature of this type of tumors, a bilateral occurrence is extremely rare, and in the literature there are only 11 preceding clinical reports (Table 1), although in the series of autopsies there is also an observed prevalence of bilaterality that is greater than expected (7%).<sup>4</sup>

Diagnosis by imaging studies is usually begun with radiography, which can detect either a soft tissue mass or an elevation of the scapula. On ultrasound, a sub- and pre-scapular mass with a fibrillar, fasciculated appearance is usually observed. On CT, it is seen as a non-encapsulated mass that is lenticular in shape, isodense with the surrounding musculature, and with hypodense striations that correspond with dense fat. Lastly, MRI, which is considered the main imaging technique for its diagnosis, shows the ED as a fatty and fibrous lesion, as seen in a heterogeneous image with areas of intensity similar to muscle tissue (the fibrous part),

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