CASE FOR DIAGNOSIS

Stony-hard Subcutaneous Nodule

Nódulo pétreo subcutáneo

Medical History

A 78-year-old woman with a history of arterial hypertension was referred to our dermatology department for assessment of a nodule on the proximal third of the right forearm that had first appeared more than 10 years earlier. The lesion was not painful but did cause mild discomfort following trauma or manipulation.

Physical Examination

Physical examination revealed a small, hard, well-defined, 7-mm subcutaneous nodule that was adherent to deeper tissue layers and appeared to move with muscle contraction.

Histopathology

Histopathologic examination (Fig. 1) revealed a subcutaneous mass consisting of fibroblasts with ovoid nuclei and prominent nucleoli. Calcified areas and foci of chondroid metaplasia were also observed.

Additional Tests

A skin ultrasound performed during the consultation (Fig. 2) showed a heterogeneous, well-defined, ovoid lesion that contained hypoechoic areas and was clearly in contact with the underlying muscle tissue, to which it appeared to be attached. Doppler ultrasound showed no increase in intralor perilesional vascularization.

Figure 1  Hematoxylin-eosin, original magnification ×4.

Figure 2

What Is Your Diagnosis?

Diagnosis

Calcifying aponeurotic fibroma.

Clinical Course and Treatment

The nodule was excised and direct closure of the defect was performed without complications. The patient has remained asymptomatic with no recurrence detected.

Comment

Calcifying aponeurotic fibroma is a benign tumor first described in 1953. It has traditionally been considered more frequent in children and adolescents. This lesion has been reported in patients of many ages, including as old as 69 years, although our patient was even older, at 78 years of age. The lesion is usually located on the most distal part of the limbs, although cases at less common sites have also been reported.

Clinical presentation of calcifying aponeurotic fibroma takes the form of a hard tumor that is not attached to the underlying skin, grows slowly and progressively over several years, and is completely asymptomatic except in cases in which symptoms are caused by the compression of adjacent structures.

Diagnosis is based on a combination of clinical findings and imaging studies. Radiology studies tend to reveal a mass of soft tissues containing irregular foci of calcification. In one case report, ultrasound showed a well-defined lobed mass containing hyperechoic foci. Computed tomography and magnetic resonance imaging findings have also been described. However, although imaging studies can provide clues, definitive diagnosis is always based on histopathologic examination of either a partial biopsy specimen or the excised lesion. Histopathology shows a tumor composed of fibroblasts with round or ovoid nuclei and a tendency to infiltrate the surrounding tissue. In addition, chondroid metaplasia and clear foci of calcification are often present. The differential diagnosis varies depending on the site, but must include chondroma, palmar-plantar fibromatosis, pilomatrixcoma, aggressive fibromatosis, and synovial sarcoma.

The first-line treatment is complete excision of the lesion. Nevertheless, the likelihood of recurrence is high because the infiltrative nature of the lesion often prevents complete excision.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References