Intramuscular myxoma in psoas muscle and in thigh☆

Mixoma intramuscular en psoas y en muslo

Intramuscular myxomas are benign tumors with a frequency of 1–1.3 cases per 1 000 000, 70% of which appear in women between the ages of 40 and 70 years. They present as slow-growing painless soft masses, predominantly located in the lower limbs. Since the differential diagnosis is established with malignant soft-tissue neoplasms, the definitive diagnosis is obtained after surgical biopsy. Treatment is surgical. Histologically, intramuscular myxomas are hypocellular and hypovascular, with abundant myxoid content and no mitosis, atypia, or necrosis. They do not become malignant or metastasize. Local recurrence is low.

We present the cases of 2 patients with intramuscular myxoma.

Case 1

The patient is a 60-year-old woman with a mass in the right quadriceps. MRI of the right thigh showed a 2 × 1.7 × 2.1 cm lesion with smooth contours in the vastus lateralis of the right quadriceps, with a homogeneous signal on the non-contrast sequence, similar to the musculature on T1 sequences; post-contrast enhancement was heterogeneous and moderate-intense (Fig. 1).

We decided to remove the mass surgically, opening of the fascia lata and the vastus lateralis, followed by *en bloc* excision of the intramuscular lesion together with the surrounding muscle.

The pathology study showed hypocellular mesenchymal proliferation without atypia, mitosis, or necrosis in an edematous myxoid matrix dissecting the adjacent muscle tissue and in contact with the resection margin. Positivity for smooth muscle actin and desmin was weak, and S100 and p53 expression was negative, which was compatible with an intramuscular myxoma measuring 3.2 × 2.1 × 1.8 cm with margin involvement.

Fourteen months later, the patient has not presented local recurrence.

Case 2

The patient is an asymptomatic 64-year-old man in whom abdominal ultrasound revealed a large, homogeneous, hypoechoic soft tissue lesion adjacent to the right psoas. MRI demonstrated a right retroperitoneal mass measuring 8.3 × 5.5 × 4.2 cm in the psoas in contact with the inferior vena cava and the L2–L5 vertebrae, which was markedly hyperintense on T2, well defined, showing no diffusion restriction, with little post-contrast uptake, slow and progressive, suggesting a myxoid predominance (Fig. 2).

Laparotomy was performed with the Cattle maneuver and opening of the psoas, followed by simple dissection of the mass, which was adhered to the vertebral bodies without invading them.

The pathology study confirmed hypocellular mesenchymal proliferation, with abundant myxoid stroma, focally invading the peripheral muscle tissue, without atypia, mitosis or tumor necrosis, negative for smooth muscle actin, desmin and S100, compatible with an 11 × 6 × 4 cm intramuscular myxoma with margin involvement.

Follow-up MRI studies 6 and 12 months later showed no local recurrence.

Intramuscular myxomas are painless, solitary, benign soft tissue mesenchymal tumors measuring 2–15 cm,[1] that are asymptomatic unless neighboring structures are compressed.[2] They are slow-growing and found most frequently in the thighs and buttocks; while they can also appear in the rib cage, abdominal wall or oral cavity,[3,4] the psoas is rare.

Multiple lesions may occur as part of Mazabraud or McCune-Albright syndromes.[1,5] They are frequently associated with trisomies of chromosomes 8 and 7, like other neoplasms, or somatic mutations of the Arg201 codon of the GNAS1 gene on chromosome 20q13.[6]

Diagnosis requires imaging tests to delimit the lesion and assess its relationship with adjacent structures, and histological confirmation to differentiate it from sarcomas. Ultrasound shows a well-defined, homogeneous and hypoechoic lesion, and CT shows well-defined, homogeneous and hypointense lesions, with no post-contrast enhancement. MRI is the gold standard, showing well-defined lesions with a capsule, sometimes with intralesional cysts or surrounded by a fatty ring. They usually present homogeneous hypointensity on T1 sequences, with marked hyperintensity on T2 relative to the surrounding tissue, and heterogeneous variable enhancement on images with contrast that can show different patterns,[4,7,8] as in our cases.

While they appear well defined macroscopically, histologically they are hypocellular, hypovascular tumors with abundant mucinous stroma devoid of collagen, with no mitosis, atypia or necrosis; also, although they present focal areas of hypercellularity and hypervascularity, their benign behavior does not change.[8,9] Microscopically, they usually invade and/or atrophy the surrounding muscle tissue.[7,9] Immunohistochemistry usually shows positivity for vimentin

☆ Please cite this article as: Kaibel Val R, Vázquez Echarri J, Kaibel Axpe I. Mixoma intramuscular en psoas y en muslo. Cir Esp. 2023. https://doi.org/10.1016/j.ciresp.2023.02.013

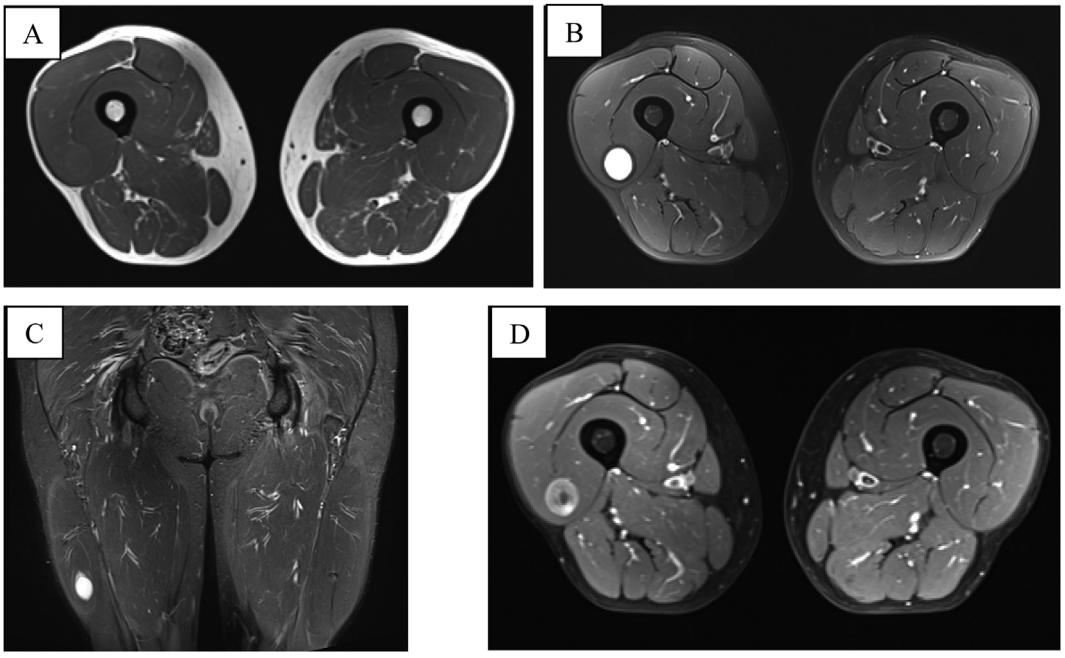

Fig. 1 – MRI of thighs: (A) intensity similar to the musculature in T1 sequences, without fat suppression; (B and C) high intensity in PD sequences with fat suppression showing cranial and caudal halo; (D) peripheral heterogenous moderate-intense enhancement with hypointense nodular central area and no enhancement in T1 post-contrast.

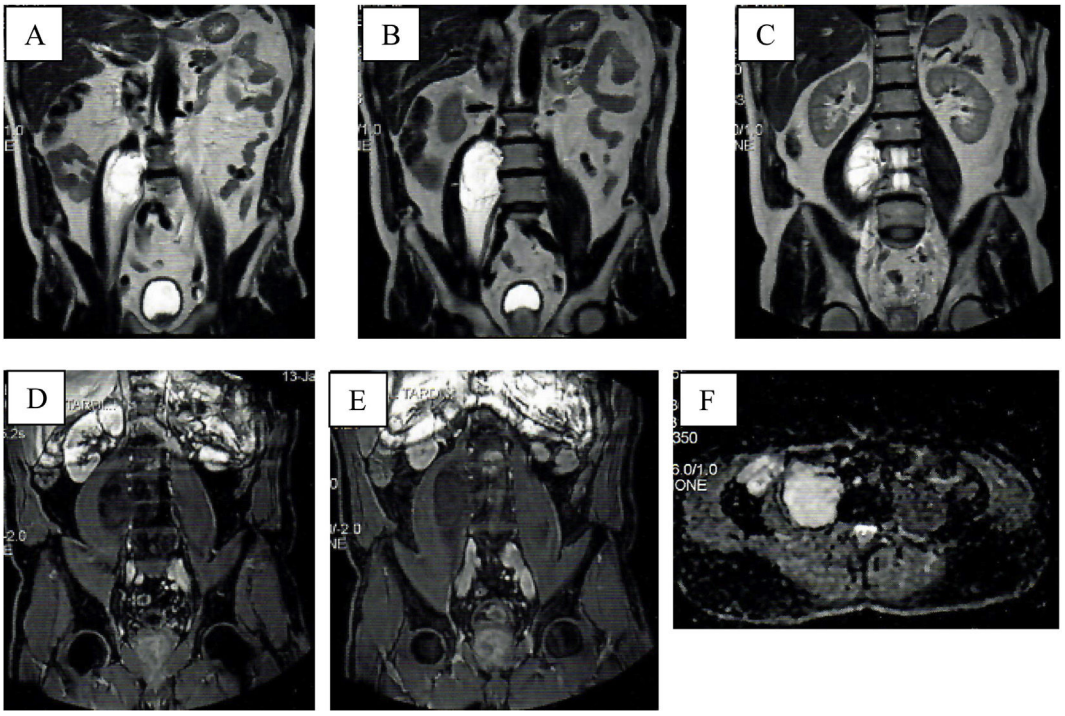

Fig. 2 – Pelvic MRI: (A–C) hyperintense lesion in T2 without fat suppression, well delimited and interior septa; (D and E) T1 sequences with fat suppression and contrast, limited enhancement, slow but progressive; (F) no restriction of diffusion.

and negativity for S-100, desmin, smooth muscle actin and α-1 antitrypsin.[2,9]

The differential diagnosis is mainly established with other myxoid tumors, both benign and malignant.[6,9] Tru-Cut core needle biopsy is recommended for pathology and immunohistochemical studies to differentiate them from sarcomas.[9,10]

Treatment is surgical resection. In a series of 55 myxomas, no local recurrence was observed after 19 years of follow-up; extended or simple resection has been performed despite margin involvement, and simple resection was recommended due to its lower morbidity.[1,10] Local recurrence is around 3%–8%, with higher risk in the first 2 years.[1,9] Myomas never metastasize. Recurrence has not been observed in any of our patients.

Funding

This article has received no specific funding from public, commercial or non-profit organisms.

Conflicts of interest

None to declare.

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http://dx.doi.org/0.1016/j.cireng.2023.04.002
2173-5077/

Hamman's sign after a dental procedure?

¿Signo de Hamman tras un procedimiento dental?

Pneumomediastinum is a rare clinical entity characterized by the presence of air in the mediastinum. Its secondary iatrogenic origin due to a minor dental process is extremely rare and requires a high rate of suspicion for diagnosis.

We present the clinical case of a 67-year-old patient, with no medical history of interest, who came to the Emergency Department 8 h after having a dental filling procedure of the first and second lower left premolars. The patient described that, during the polishing phase of the procedure (performed with rotary instruments that dispense air and water), the patient experienced the abrupt onset of pressure in the left hemifacial region. Her odontologist observed edema of the surrounding mucosa, with increased volume of the soft tissue to the ipsilateral periobital area. Given the suspected diagnosis of an allergic reaction secondary to the local anesthetic, the patient was immediately administered corticosteroid treatment. However, the patient reported progressive worsening and onset of oppression in the cervicothoracic region, at which time she was referred from the dental clinic to our medical center.