ACTAS
Dermo-Sifiliográficas

Full English text available at
www.elsevier.es/ad

CASE AND RESEARCH LETTERS

Superficial Acral Fibromyxoma: A CD34+ Periungual Tumor☆

Fibromixoma acral superficial, un tumor periungueal CD34 positivo

To the Editor:

We report on the case of a 40-year-old patient, with no relevant medical history, who consulted for a periungual tumor on the second finger of the left hand. The lesion, which was asymptomatic, had appeared 2 years earlier, and had shown slow, progressive growth. The physical examination showed a 1-cm diameter tumor with poorly defined borders that was not attached to the deep layers (Fig. 1A). The lesion was firm and slightly painful on palpation. Four years earlier, a similar lesion—diagnosed as periungual fibroma—had been excised from the same location.

Histologic examination of the current lesion, removed by simple excision with curettage of the base, showed an epidermis with mild orthokeratotic hyperkeratosis and a poorly circumscribed dermal neoplasm (Fig. 1B) formed by a population of spindle cells embedded in loose stroma composed of alternating myxoid and fibromyxoid areas of identical cell density, without a clearly defined architecture (Fig. 1C). There were also numerous mast cells that stained positive for CD117. Alcian blue staining showed a predominance of acid mucopolysaccharides in less fibrous areas. There was no evidence of nuclear atypia or mitosis. Neoplastic cells were diffusely and strongly positive for CD34 (Fig. 1D) and CD99 throughout the thickness of the tumor, and there was a low Ki-67 index (<5%). Staining for epithelial membrane antigen (EMA) and S100 protein was negative. Based on these findings, a diagnosis of superficial acral fibromyxoma (SAF) was established. Because the lateral and deep borders of the resection specimen were affected, extension of the surgical field was considered, but the patient refused a second operation. He has attended regular follow-up visits, and at the time of writing, 6 months later, he remains asymptomatic. Magnetic resonance imaging at the 4-month follow-up showed no evidence of residual tumor.

SAF is a neoplasm that was first described in 2001 by Fetsch et al.,[1] who reported on a series of 37 cases after conducting a review of 280 fibrohistiocytic tumors of distal extremities diagnosed over 3 decades. The tumors evaluated included fibroma, fibromyxoma, myxoma, myxolipoma, dermatofibroma, fibrous histiocytoma, and angiofibroma. Since then, several isolated case reports and series have been published.[2–6] SAF is a benign lesion[1,2] and there have been no reports of malignant transformation or metastasis. The few cases of recurrence that have been reported have been associated with incomplete resection.[3,4] The literature contains reports of approximately 100 cases of SAF and several authors consider that this tumor is underdiagnosed.

Clinically, SAF is more common in men than in women, with a ratio of 2 to 1, and it has been described in patients aged between 14 and 75 years (median, 46 years).[1] It tends to have a firm consistency and generally grows slowly and painlessly, explaining why many patients delay visiting their physician. It primarily affects, by order of frequency, the toes (mainly the big toe), the fingers, and more rarely the palms and the soles.[1,3,4] Nail involvement is seen in 50% of cases, with hyperkeratosis or onycholysis accompanied occasionally by pain on compression. Erosion of the underlying bone is rare but it has been reported.[7]

Histologically, SAF is a well-circumscribed—but not encapsulated—dermal or subcutaneous tumor with increased vascularization[1–5]; these findings contrast with those observed in our patient. There have been some reports of multinucleated stromal cells, areas of necrosis, lipomatous areas, and epidermal signs of viral infection.[1–5,8] Detection of viral infection led to the suggestion that human papillomavirus might be involved in the etiopathology of SAF.[4] Immunoreactivity to CD34 is common, but there are tumors that test negative for this marker.[9] CD10, CD99, EMA, and nestin immunoreactivity are also common. Given the immunoreactivity of these markers, several authors have postulated that mesenchymal stem cells residing in distal extremities might be the origin of SAF.[1,8,10] Immunohistochemical staining for S100 protein, actin, desmin, cytokeratin, apolipoprotein D, and HMB45 is almost always negative.[1,2,4]

On detection of CD34 immunoreactivity, it is necessary to rule out other entities that stain positive for this marker, in particular myxoid variants of dermatofibrosarcoma protuberans (DFSP) (Table 1). It was traditionally considered that myxoid DFSP was more common than other variants of this tumor in distal extremities, but this could be because many cases diagnosed as myxoid DFSP were actually SAF.

☆ Please cite this article as. Messeguer F, et al. Fibromixoma acral superficial, un tumor periungueal CD34 positivo. Actas Dermosifiliogr. 2012;103:67–9.

1578-2190/$ - see front matter

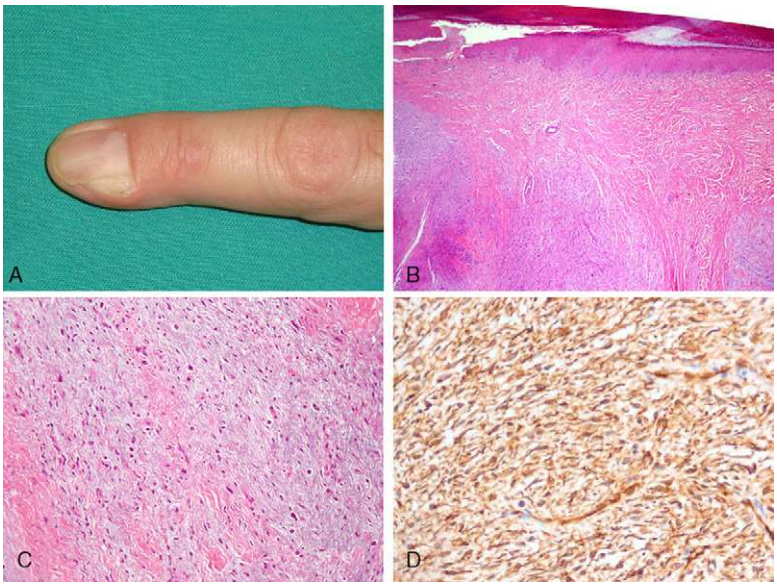

Figure 1 A, Subcutaneous nodule on the second finger of the left hand, causing partial deformation of the nail matrix. B, Dermal tumor composed of alternating fibromyxoid and myxoid areas. C, Spindle-shaped cells embedded in a myxoid stroma. Also visible are numerous mast cells with a round nucleus and abundant cytoplasm (hematoxylin–eosin, original magnification ×100). D, Diffuse cytoplasmic positivity for CD34 in neoplastic cells (hematoxylin–eosin, original magnification ×200).

Table 1 Spindle-Cell Tumors That Express CD34.

Tumor by Frequency of CD34 Positivity	Characteristic Findings	Immunohistochemistry
Very frequent		
Dermatofibrosarcoma protuberans	Chromosomal translocation t(17;22) Storiform pattern and fingerlike subcutaneous infiltration	Positive for apolipoprotein D, actin, and vimentin Negative for S100 protein, HMB5, cytokeratin, and factor XIIIa
Solitary fibrous tumor	Very rare benign tumor of the skin, generally located on the head or neck. Highly variable histologic findings	Positive for CD99 and vimentin Negative for S100 and muscle markers
Sclerotic fibroma		Similar to solitary fibrous tumor
Nerve sheath tumors (neurofibroma, neuroma)	Wavy nuclei	Positive for S100 protein
Spindle-cell lipoma		Positive for S100 protein
Superficial acral fibromyxoma	Fibromyxoid areas, increased vascularization, and presence of mast cells	EMA, CD99, CD10, and nestin positivity Negative for S100, apolipoprotein D, cytokeratin, vimentin, and desmin
Cellular digital fibroma	Similar to superficial acral fibromyxoma Less myxoid and more cellular	Similar to superficial acral fibromyxoma
Variable/occasional		
Epithelioid sarcoma	Epithelioid nodules or groups of cells surrounding a central necrotic area	Positive for cytokeratin, EMA, and vimentin
Acral myxoinflammatory fibroblastic sarcoma	Infiltrative growth pattern, considerable inflammatory component, myxoid or hyaline stroma with 3 populations of tumor cells (multinucleated Reed–Sternberg-like cells, epitheloid cells, and spindle-shaped cells).	Positive for vimentin and occasionally for CD34 and CD68 Negative for EMA and S100
Low-grade myxofibrosarcoma	Significant pleomorphism, numerous atypical mitoses, prominent curvilinear capillaries	Positive for vimentin and actin Occasionally positive for CD34 Negative for desmin and EMA
Angiosarcoma	Vascular lumens with an infiltrative pattern, blood extravasation, and hemosiderin deposits	Positive for blood and lymph vessel markers (F-VIII-RA, D2-40, CD31)
Dermatofibroma		Rarely positive for CD34 Positive for factor XIIIa

Myxoid DFSP expresses apolipoprotein D and presents with a storiform pattern and characteristic subcutaneous infiltration. Diagnosis is confirmed by detection of the chromosomal translocation t(17;22). The differential diagnosis should include benign myxoid lesions with spindle-shaped cells (myxoid neurofibroma, superficial angiomyxoma, mucous cyst), malignant myxoid lesions with spindle-shaped cells (myxoid DFSPM, acral myxoinflammatory fibroblastic sarcoma, low-grade fibromyxoid sarcoma, myxofibrosarcoma), and other acral neoplasms such as sclerosing perineurioma, periungual fibroma, digital fibrokeratoma, and cellular digital fibroma. This last entity is composed of spindle-shaped CD34-immunoreactive cells and can be distinguished from SAF as it is less myxoid and more cellular, although several authors have postulated that they are the same entity.[11]

The treatment of choice for SAF is surgical resection with tumor-free margins.[1,3] Because SAF can recur, patients should be closely monitored after surgery, particularly when, like our patient, they have involved resection margins.[1,3]

In conclusion, dermatologists and dermatopathologists should include SAF in the differential diagnosis of fibrohistiocytic tumors of distal extremities. Early diagnosis and complete resection are key to preventing recurrence.

References

1. Fetsch JF, Laskin WB, Miettinen M. Superficial acral fibromyxoma: a clinicopathologic and immunohistochemical analysis of 37 cases of a distinctive soft tissue tumor with a predilection for the fingers and toes. Hum Pathol. 2001;32:704–14.
2. Andre J, Theunis A, Richert B, de Saint-Aubain N. Superficial acral fibromyxoma: clinical and pathological features. Am J Dermatopathol. 2004;26:472–4.
3. Prescott RJ, Husain EA, Abdellaoui A, Al-Mahmoud RM, Khan M, Salman WD, et al. Superficial acral fibromyxoma: a clinicopathological study of new 41 cases from the U.K.: should myxoma (NOS) and fibroma (NOS) continue as part of 21st-century reporting? Br J Dermatol. 2008;159:1315–21.
4. Al-Daraji WI, Miettinen M. Superficial acral fibromyxoma: a clinicopathological analysis of 32 tumors including 4 in the heel. J Cutan Pathol. 2008;35:1020–6.
5. Luzar B, Calonje E. Superficial acral fibromyxoma: clinicopathological study of 14 cases with emphasis on a cellular variant. Histopathology. 2009;54:375–7.
6. Chattopadhyay M, Farrant P, Higgins E, Hay R, Calonje E. A nodular lesion of the toe. Superficial acral fibromyxoma (SAF). Clin Exp Dermatol. 2010;35:807–9.
7. Varikatt W, Soper J, Simmons G, Dave C, Munk J, Bonar F. Superficial acral fibromyxoma: a report of two cases with radiological findings. Skeletal Radiol. 2008;37:499–503.
8. Tardio JC, Butron M, Martín-Fragueiro LM. Superficial acral fibromyxoma: report of 4 cases with CD10 expression and lipomatous component, two previously underrecognized features. Am J Dermatopathol. 2008;30:431–5.
9. Pasquinelli G, Foroni L, Papadopoulos F, Dicandia L, Bisceglia M. Superficial acral fibromyxoma: immunohistochemical and ultrastructural analysis of a case, with literature review. Ultrastruct Pathol. 2009;33:293–301.
10. Misago N, Ohkawa T, Yanai T, Narisawa Y. Superficial acral fibromyxoma on the tip of the big toe: expression of CD10 and nestin. J Eur Acad Dermatol Venereol. 2008;22:255–7.
11. Guitart J, Ramírez J, Laskin WB. Cellular digital fibromas: what about superficial acral fibromyxoma? J Cutan Pathol. 2006;33:762–3 [author reply 764].

F. Messeguer,* E. Nagore, A. Agustí-Mejias, V. Traves

Servicio de Dermatología, Instituto Valenciano de Oncología, Valencia, Spain

*Corresponding author.
E-mail address: francescmb@comv.es (F. Messeguer).

doi:10.1016/j.adengl.2011.03.018

Mycobacterium Chelonae Infection in a Patient Being Treated With Adalimumab☆

Infección por *Mycobacterium Chelonae* en un paciente en tratamiento con adalimumab

To the Editor:

Mycobacterium chelonae is an atypical or nontuberculous mycobacteria belonging to the Runyon group of nonpigmented, rapidly growing mycobacteria. Infection with *M chelonae* takes the form of either infection of the soft tissue and bones as a result of direct inoculation (the clinical spectrum varies from localized skin abscesses to frank osteomyelitis) or a disseminated infection, usually found in the context of immunodepression. Fever, night sweats, and weight loss are the most common symptoms, and the skin lesions present as diffuse subcutaneous nodules and abscesses.[1]

Adalimumab is a fully human anti-tumor necrosis factor (TNF) α monoclonal antibody. TNF-α plays a very important role in the regulation of immune responses against intracellular pathogens. Consequently, many of the adverse effects that could potentially lead to high morbidity and mortality in patients on anti-TNF therapy are due to lowered resistance to infection. TNF increases the phagocytic capacity of macrophages while promoting the destruction of intracellular pathogens, granuloma formation, and the sequestration of mycobacteria, thereby preventing their spread.[2]

We report the case of a 76-year woman with history of type 1 diabetes mellitus, hypertension, hypercholesterolemia, and seropositive rheumatoid arthritis diagnosed 20 years earlier. She had been treated with corticosteroids and methotrexate from 1992 to 2000, corticosteroids and azathioprine from 2000 to 2003, and corticosteroids and

☆ Please cite this article as: Conejero R, Ara M, Lorda M, Rivera I. Infección por *Mycobacterium chelonae* en paciente en tratamiento con adalimumab. Actas Dermosifliogr. 2012;103:70-71.