24% respectively.[1,9] It has been proposed that ENL probably occurs in patients during the transition to manifest HL,[1] as our first case.

The instant confirmation of histoid leproma is made with smears test, which has a specificity of 100% and a sensitivity of 50%, and can be obtained from nasal mucosa, an ear lobe or skin lesions.[2]

Histopathological findings are unique, epidermis may be normal or atrophic with a Grenz zone. The leproma consists of fusiform histiocytes arranged in a whorled, criss-cross, or storiform pattern.[5] Within the histiocytes, plenty of acid fast bacillus can be found. They are longer than the normal bacilli, are uniform in length and are arranged in parallel bundles along the long axis of the spindle histiocytes with or without globus formation.[3] In addition the factor XIIIa positive is characteristic and the loss of S100 expression.[10]

It has been treated on the lines of multibacillary leprosy with the recommended WHO MDT.[3] Researchers have also managed initially by giving the range of motion therapy, with rifampicin 600 mg, ofloxacin 400 mg, and minocycline 200 mg, which is followed by MDT.[8]

To conclude, it is important to recognize atypical leprosy presentations to continue the surveillance for new cases, since early diagnosis and complete treatment are important to achieve our goal of eliminating leprosy. Furthermore, continuous medical follow-up must be done after a multidrug therapy in order to detect these rare variants.

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Heparin-Induced Skin Necrosis Occurring at a Distance From Injection Sites☆

Necrosis cutánea por heparina con afectación a distancia del punto de administración

To the Editor:

A 67-year-old man who had been diagnosed 1 year earlier with inoperable glioblastoma multiforme that was refractory to multiple treatments was treated with low-molecular-weight heparin (LMWH) after an episode of pulmonary thromboembolism and deep venous thrombosis. Disseminated asymptomatic skin lesions appeared 5 days after beginning LMWH therapy. Despite the spectacular appearance of the skin lesions the patient's general condition was excellent. Fever and other clinical signs of infection were absent. Physical examination revealed large, noninfiltrated ecchymotic plaques located mainly on the abdomen without underlying fluid collection (Fig. 1A), necrotic lesions on the right thigh (Fig. 1B), and tense blisters with hemorrhagic content in the distal area of the right leg (Fig. 1C).

Based on the patient's clinical picture a suspected diagnosis of heparin-induced skin necrosis was established. Laboratory tests, including a complete blood count and coagulation parameters, revealed no findings of interest, apart from thrombocytopenia (107 000 platelets/mL). Tests for anti-platelet factor 4 antibodies were negative. Heparin treatment was immediately discontinued and oral anticoagulation treatment with warfarin was initiated. Fifteen days after heparin discontinuation a clear improvement in the patient's lesions was observed (Fig. 2) and the platelet count returned to 130 000 platelets/mL. Skin necrosis in response to anticoagulant treatment is a rare adverse

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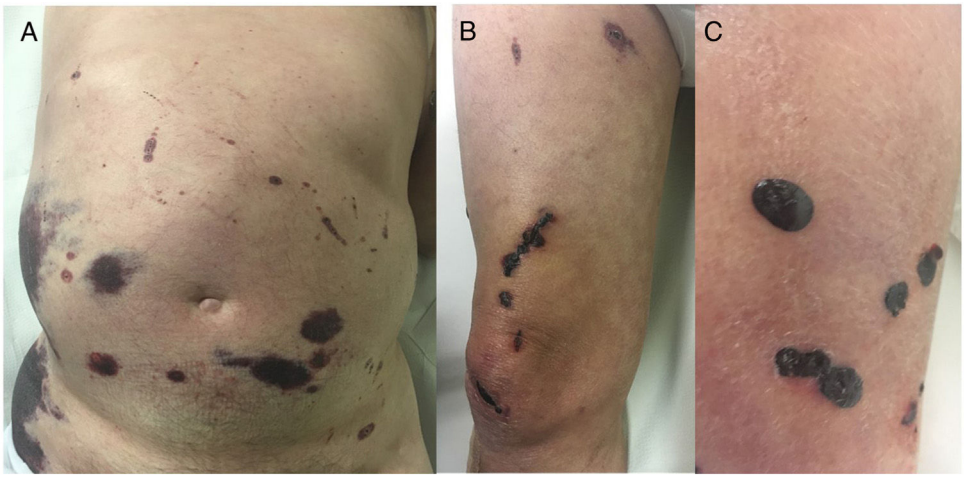

Figure 1 A, Abdominal ecchymotic plaques. B, Necrotic lesions on the right thigh. C, Tense hemorrhagic blisters in the distal area of the right leg.

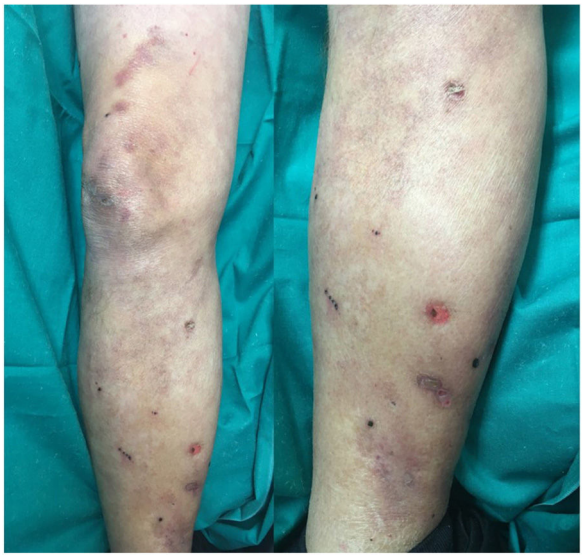

Figure 2 Resolution of necrotic lesions 15 days after discontinuing heparin treatment.

reaction, and is rarer in patients treated with heparin than in those treated with oral anticoagulants (0.01% of patients).[1] Although the pathogenesis of this adverse effect is unclear, most authors suspect an immune mechanism whereby heparin-induced production of anti-platelet antibodies triggers platelet aggregation and consequent vascular occlusion. Heparin-induced skin necrosis is considered part of heparin-induced thrombocytopenia syndrome, although a decrease in platelet count is observed in only 50% of patients.[2] Clinical signs appear between 5 and 15 days after beginning treatment, usually close to the injection site, although rarer cases involving lesions at a distance from the injection site have also been described.[3]

Lesions initially appear as painful, well-delimited erythematous or hemorrhagic macules that become indurated over the following days. Subsequently, the lesions become necrotic and give way to tense, painful serosanguineous sores and blisters that evolve into marked necrosis of the skin and subcutaneous cellular tissue. In addition to marked necrotic lesions, affected patients may present with other abortive erythematous or cyanotic lesions.

Blood tests typically reveal thrombocytopenia and the presence of anti-platelet factor IV antibodies, although their absence is insufficient to rule out heparin-induced skin necrosis.[4]

Diagnosis is mainly clinical, with histological confirmation in doubtful cases. The main differential diagnoses are warfarin-induced skin necrosis and heparin-induced type-IV hypersensitivity reaction.

Treatment consists of immediate discontinuation of heparin administration and replacement with other anticoagulants such as direct thrombin inhibitors (hirudins) or warfarin.[5,6] Substitution with other LMWHs is not recommended. Discontinuation of heparin treatment is followed by rapid recovery of the platelet count and progressive healing of necrotic lesions, as occurred in the present case.

The most common adverse effects of heparin include bleeding, alopecia (in up to 50% of patients undergoing prolonged treatment), osteoporosis, hypersensitivity phenomena, and thrombocytopenia. Skin necrosis is a rare adverse reaction to heparin, but should be taken into consideration.[7] Diagnosis is primarily clinical, and early withdrawal of heparin treatment is essential to avoid the development of potentially fatal visceral thrombotic complications.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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Papular Sarcoidosis of the Knees Following Treatment with Interferon Alpha and Ribavirin in a Woman with Hepatitis C☆

Sarcoidosis papulosa de las rodillas tras tratamiento con interferón alfa y ribavirina en paciente con hepatitis c

To the Editor:

Chronic hepatitis caused by the hepatitis C virus (HCV) is associated with skin diseases including lichen planus, mixed cryoglobulinemia, porphyria cutanea tarda, pruritus, and necrolytic acral erythema. Cutaneous adverse effects are also common in patients treated with interferon (IFN), particularly when combined with ribavirin. These include injection-site reactions, alopecia, xerosis, pruritus, nummular eczema, lichen planus, and psoriasis flares.[1]

Sarcoidosis is a chronic systemic granulomatous disease of possible autoimmune etiology that primarily affects the lungs and lymph nodes. Induction of sarcoidosis, especially pulmonary and cutaneous forms, has been described in HCV patients treated with IFN alfa and ribavirin. It is thought that IFN alfa favors the differentiation of CD4 T cells, promoting a Th1-type immune response with subsequent granuloma formation. This mechanism may be intensified by ribavirin.[2]

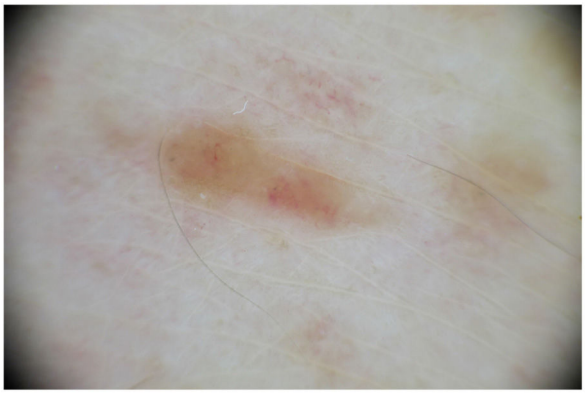

Figure 2 Dermoscopic image showing an area of homogeneous yellow-orange coloration within which linear vessels are evident. (A full-color version of this image can be found in the web version of this article.)

We present the case of an adult woman with chronic hepatitis due to HCV who was treated with telaprevir, IFN alfa, and ribavirin and who developed papular sarcoidosis of the knees.

The patient was a 51-year-old woman with Child class A liver cirrhosis due to HCV genotype 1A, for which she had begun antiviral therapy 6 months earlier with telaprevir, IFN alfa, and ribavirin. She was seen for asymptomatic lesions on the knees that had appeared several months earlier.

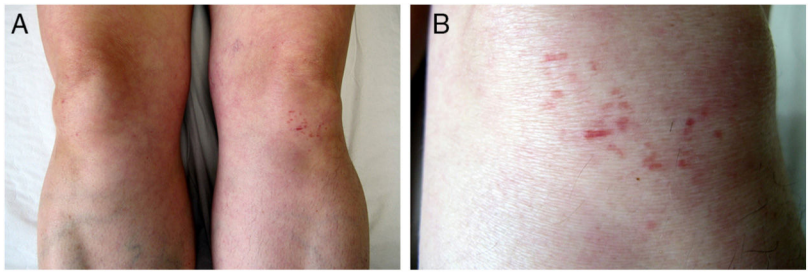

Figure 1 A, Brownish erythematous papules on both knees. B, Detailed image showing lichenoid lesions, some arranged linearly, on the left knee.

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