

Sporotrichosis Following Mesotherapy for Arthrosis

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Sir,

Sporothrix schenckii usually exists as a saprophyte in association with a variety of vegetation, decomposing wood, moss and soil, and may affect people who are exposed to the organism, for example gardeners, florists, farmers, foresters, masons, veterinarians and agricultural workers.

The injection of small quantities of different pharmacological substances into the dermis or hypodermis is a medical technique known as "mesotherapy" in some countries. Infectious complications following mesotherapy are usually due to ordinary bacteria or atypical mycobacteria.

We present here two cases of sporotrichosis following mesotherapy on both knees.

CASE REPORTS

Case 1

A 76-year-old woman with no known history of drug allergies, diagnosed with depression, peptic ulcer and arthrosis, presented at our outpatient unit with a 2-month history of pruritic and painful violaceous nodules on both knees. Some of the nodules presented spontaneous seropurulent exudation. She had been treated with five sessions of localized microinjections (mesotherapy) on both knees over the previous 8 months, during which a mixture of triamcinolone acetonide, procaine and distillate water had been administered. She did not report any weight loss, fever or chills.

Physical examination revealed firm, erythematous papules and nodular lesions, some with superficial ulceration and others with a crust, located on both knees in a radial distribution (Fig. 1). A skin biopsy showed widening of septolobular hypodermis, multiple dermal abscesses and granulomas made of epithelioid and giant cells of langhanoid type. A biopsy culture found *S. schenckii*. Urinalysis, full blood count and erythrocyte sedimentation rate were normal. Biochemical analysis was normal, except for elevated cholesterol levels (304 mg/dl). A chest X-ray demonstrated aortic elongation, hiatus hernia and aortic atheroma.

She was given potassium iodide treatment; 300 mg three times a day for 8 months with clearing of the lesions and pigmented residual macules.

Case 2

A 62-year-old woman with no known history of drug allergies diagnosed with diverticulitis, arthrosis and leukocytoclastic vasculitis had a 4-month history of violaceous papules on both knees. The lesions appeared 4 weeks after the fourth session of localized microinjection treatment at this site (4 mm-Lebel needle), during which a mixture of triamcinolone acetonide, procaine and distillate water had been administered. Systemic symptoms were absent.

Dermatological evaluation revealed violaceous papules that followed a radial distribution at the injection sites.



Fig. 1. Erythematous papules and nodular lesions, some with superficial ulceration and others with a crust, in a radial distribution on the right knee (case 1).

A biopsy found a polymorphic inflammatory infiltrate in the superficial and middle dermis, composed of histiocytes and neutrophils. Grocott and paired associative stimulation (PAS) techniques did not reveal fungal structures. Skin biopsy culture was negative. Urinalysis, full blood count, erythrocyte sedimentation rate, biochemical analysis and chest X-ray were normal.

Skin biopsy culture was negative, but both patients had the same clinical features and had received identical treatment in the same clinic the same period of time. After 4 months of potassium iodide treatment (300 mg three times a day) with poor response, treatment was changed to 100 mg itraconazole daily. Six months later all lesions had resolved.

DISCUSSION

Sporotrichosis is a chronic infection caused by *S. schenckii* that usually results from accidental skin inoculation with contaminated soil or plant material. Sporotrichosis is classified as lymphocutaneous, fixed cutaneous or disseminated. The disease is rare in Europe.

S. schenckii grows in vegetation that includes decayed and living organic materials; for example, hay, thorn bushes, sphagnum moss, bark and soil. Occupation and exposure are important factors in acquiring the disease, and it is found most frequently in gardeners, florists, farmers, stonemasons, foresters, veterinarians and agricultural workers. Exposure to animals that are

infected or able to passively transfer the organism from the soil, is another less common route of infection. A few cases have also been described following tattooing and electrolysis (1, 2).

Intradermal injection is used to control pain syndromes and other diseases by subcutaneous microinjections at or around the involved areas. In France this is called "mesotherapy" and is defined by subcutaneous injections of 0.05–1 ml of different drugs, perpendicular to the skin.

Many different drugs are used, for example non-steroidal anti-inflammatory drugs (NSAIDs), B1 and B12 vitamins, troxerutin, thiomucase and naftidrofuryl. These are usually given in combination with procaine, not only because of its anaesthetic properties, but also because it causes vasodilatation, potentiates the effects of NSAIDs and prolongs the half-life of some drugs.

Intra-lesional treatment is used mainly in osteoarticular diseases, such as arthrosis and tendonitis, but it has also been used for the treatment of cellulite, rides, keloids, varicose veins, hair loss, gastritis, dyspareunia, insomnia and other psychosomatic diseases.

There are few reported cases of mild complications following mesotherapy. Haematoma formation, local erythema or oedema, local, urticarial reaction or generalized urticarial reaction, cutaneous necrosis, tattoo, achromia, lipodystrophy, panniculitis and liquenoid reactions have been described (3, 4). Cellulitis caused by ordinary bacteria is not uncommon and some atypical mycobacterial infections have been reported. In France, mesotherapy was found to be the second largest cause of atypical mycobacteriosis, with 15% of atypical mycobacterial infections due to mesotherapy in a national study of atypical mycobacterias from 1988 to 1992 (5). *Mycobacterium fortuitum* and *M. chelonae* are the most frequently implicated in the disease (6–8). In three reported cases the presence of a vaccinal strain of *M. bovis* has been demonstrated (9–10).

Sporotrichosis following mesotherapy has not been reported previously. We present here two cases of fixed cutaneous lesions (which is a less common form than lymphocutaneous lesions) in two European women (where the disease is not very common) following mesotherapy. Isolation of *S. schenckii* remains the mainstay of diagnosis; fungal elements are difficult to detect in biopsies.

Potassium iodide is a proven inexpensive treatment for the lymphocutaneous form of sporotrichosis, but it

has common unpleasant side-effects, such as nausea and a metallic taste. The dosage is started at 5–10 drops taken after meals three times a day, increasing to 40–50 drops every 8 h. Treatment is stopped one month after resolution of the lesions.

Itraconazole (doses from 100 to 600 daily, during 3–6 months) is as effective and better tolerated, being the treatment of choice in the current literature (11).

Inoculation of the fungus through the skin was the route of infection in our two cases. Disposable material was used for microinjections, but aseptic measures were not adequate.

Conditions commonly confused with sporotrichosis include mycobacterial infections and leishmaniasis. Some cases of mycobacterial infections have been reported following mesotherapy.

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