Letters to the Editor

Sclerodermic lesions after liposuction in a patient with Raynaud's phenomenon and anti-centromeric antibodies

Sirs,

Systemic sclerosis (SSc) is an autoimmune disorder of unknown aetiology. Trauma (1) and several pharmacological substances, including epinephrine (2, 3), have been identified as possible triggering pathogenic factors of this disorder. Here we describe the case of a patient with an overlooked prescleroderma condition who developed scleroderma skin lesions after undergoing liposuction.

A 49-year-old Caucasoid female was referred to us in June 1999, to evaluate the nature of extensive skin manifestations localised at the lower limbs at the sites of liposuction surgery performed in July 1998. The surgical procedure had been carried out using a solution of 0.05% lidocaine and 0.5 mg/ml epinephrine as local anaesthetic. The physical examination (Fig. 1) showed large sclerotic lesions that were slightly depressed and hypopigmented. They had started 3 months after the surgery and, at their onset, a dermatologist described them as "erythematous indurate plaques without subjective symptoms".

Relevant findings in the patient's past history were an additive mast plastic with silicon gel breast implants in 1988 and tri-phasic Raynaud's phenomenon (RP) of both hands and feet seen for the first time in 1996. Laboratory examination only showed the presence of high titres of circulating anti-centromeric antibodies (ACA) (1/2560) detected by the immunofluorescence technique (Hep 2000, Immunoconcepts, Sacramento, Ca, USA). On immmunoblotting these antibodies were identified as Cemp-B (80 KD) (Hep-2 Marblot, MarDx Diagnostic Inc, USA). Other serologic and humoral tests were normal including the erythrocyte sedimentation rate, C reactive protein, anti-nDNA antibodies, ENA, rheumatoid factor, cryoglobulins, C3, C4, liver and kidney function tests, thyroid hormones, muscle enzymes, and red blood cell and platelet counts. HLA typing was A2-A30 (19), B51 (5) B18/BW4BW6, CW2CW7, DR3 (17) DR52, DQ2. No signs of oesophageal, lung or cardiac involvement were found on oesophagomanometry, chest X-ray, respiratory function tests and echocardiogram. Periungueal capillaroscopy showed a typical scleroderma pattern characterised by the presence of diffuse dilations and some giant loops in the absence of avascular areas. The skin biopsy showed typical scleroderma lesions characterised by the proliferation of collagen fibres arranged in bundles in both the superficial and deep derma, together with scarce mononuclear cell infiltrates and the disappearance of cutaneous appendages.

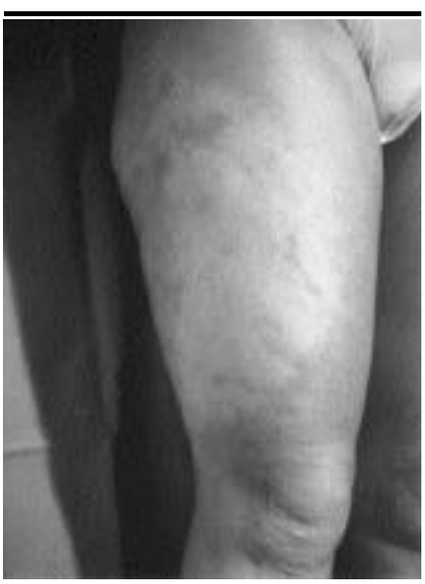

Fig. 1. Scleroatrophic hypopigmented cutaneous lesions developed in the site of liposuction on the lateral aspect of the right thigh.

Liposuction is a surgical technique used to remove fat deposits and, like any operation, presents potential health risks (4). Necrotising fasciitis is the most frequent local complication, while only 3 cases of cutaneous hyperpigmentation due to local iron deposition have been described (5). To our knowledge this is the first case reported in the literature of a patient affected by an overlooked prescleroderma condition who developed scleroderma skin lesions only at the sites of liposuction. It is worth noting that these lesions remain confined to the same areas after 3 years of follow-up. The prescleroderma condition (6) was indeed characterised by RP, typical capillaroscopy findings and by high titres of ACA suggestive of a limited form of SSc. In our case we hypothesize that the surgical trauma or the drugs used for the local anaesthesia, or both factors, might have exert a pathogenic role in triggering scleroderma in a predisposed person. In particular trauma have been described as pathogenic for SSc in predisposed subjects where the predisposition might be represented by HLA-DR52 allele (1). Interestingly this allele was also present in our case. The previous silicon implant might be intriguing but there is a large body of information (7,8) suggesting a random association more than a cause-effect relationship between silicon implants and autoimmune disorders.

In conclusion the present case suggests that in predisposed individuals, among the potential adverse effects of liposuction, scleroderma should be included. Before liposuction, the anamnesis and physical examination should include a careful evaluation of the signs and symptoms of systemic connective tissue diseases and, if found, the consultation of a specialist should be recommended, especially in the case of patients with a history of RP.

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Treatment of TRAPS with etanercept: Use in pediatrics

Sirs,

Tumor necrosis factor-alpha receptor-associated periodic syndrome (TRAPS) is a recently described autosomal dominantly inherited disorder that manifests clinically as recurrent episodes of fever, erythematous rash, myalgia, arthralgia, abdominal pain and serositis (1). In contrast with familial Mediterranean fever (FMF), episodic attacks in TRAPS tend to be of longer duration, more responsive to glucocorticoids, and unresponsive to colchicine prophylaxis. The underlying defect in TRAPS is a mutation of the gene encoding the p55 TNF receptor (2). It is not yet clear whether excessive inflammation results from decreas-

ed soluble p55 TNF receptor (which may act as a TNF-alpha antagonist), changes in quantity or activity of the p55 receptor, shunting through the p75 TNF receptor, or some other mechanism.

Since TNF-alpha is central to the pathogenesis of TRAPS, this condition is potentially an excellent candidate for the new biologic TNF-alpha antagonists, etanercept and infliximab. Etanercept, which consists of two extracellular domains of the p75 TNF receptor fused to a human IgG_1-Fc domain, is particularly appealing since it could potentially replace the role of soluble p55 TNF receptor. Early experience with etanercept in patients with TRAPS has been encouraging, and an open-label clinical trial is currently enrolling patients at the National Institutes of Health (1, 3).

Our patient is a 14-year-old female with episodes of localized inflammation since early infancy. Recurrent fever, rash and irritability led sequentially to the consideration of systemic-onset juvenile rheumatoid arthritis (JRA), familial Mediterranean fever and familial Hibernian fever. At age 11 she required laparatomy with resection of the cecum and terminal ileum for adhesions resulting from fibrosing serositis. Repeat surgery for lysis of adhesions was performed 2 years later. Empiric therapy with colchicine and prednisone was not tolerated. Partial improvement was obtained with oral tolmetin, but the patient still had monthly episodes of fever, arthralgia, cutaneous swelling or rash, and abdominal pain lasting one to three weeks. She was clinically diagnosed with TRAPS after her father, himself subject to similar recurrent fevers since age 11, was found to carry a T50M mutation in the p55 TNF receptor (2). Subsequent sequencing of the patient's TNFRSF1A gene revealed the same mutation as her father. She has had no clinical evidence of amyloidosis. Aside from TRAPS and mild asthma, she has been well.

Treatment with etanercept was started at standard pediatric doses (0.4 mg/kg SQ twice weekly, maximum 25 mg). Over the 6 months since the beginning of the therapy, she has had no further episodes of fever or local inflammation, though she still experiences occasional arthralgia or myalgia. She reports that her sense of constant malaise has diminished, though she is still unable to exercise at the same intensity as her peers. Etanercept therapy has been without side effects.

Etanercept has rapidly become well accepted for use in pediatric rheumatic diseases. Early experience in JRA suggests a benign side effect profile (4), although the effects of chronic use in children are unknown. TRAPS is a rare disorder which leads not only to recurrent painful attacks of inflammation but also to long-term consequences, such as fibrosing serositis and in some cases amyloidosis. Our experience supports preliminary reports that etanercept may be effective and safe for children with TRAPS (1,5), though its long-term effects remain uncertain.

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