A Case of Cutaneous Pseudolymphoma Associated with Silicone Injection

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Sir,

Cutaneous pseudolymphoma refers to a heterogeneous group of benign reactive T- or B-cell lymphoproliferative processes of diverse causes that simulate cutaneous lymphomas clinically and/or histologically (1). Although most pseudolymphomas are of unknown cause, various stimuli can induce them. Pseudolymphoma has followed drug ingestion, insect bites, vaccination, herpes zoster eruption and ear piercing (2). In the English literature the occurrence of lymphomas in the vicinity of silicone foreign granulomas has been reported in patients with joint implants or silicone mammoplasty, but to our knowledge pseudolymphoma has not previously been reported in proximity to a silicone injection site. This unique case adds to the growing documentation of morbidity associated with the injection of liquid silicone.

CASE REPORT

A 63-year-old man had several erythematous, palpable indurations on both cheeks, nose and arms of 8 months' duration (Fig. 1). Five years before, these areas of the face had been augmented with silicone injections for the elimination of age-related wrinkles. Histopathological examination of a skin biopsy of the cheek showed a dense nodular lymphocytic infiltrate throughout the dermis and lobular lymphocytic infiltration in the subcutaneous tissue (Fig. 2a). Immunophenotypic studies showed that most infiltrating cells expressed CD3, indicating their T-cell origin. Of these, CD4 was positive in about 70% of infiltrating cells and CD8 in 30%. The B-cell marker CD79a stained $<10\%$ of the cells, including plasma cells. A T-cell receptor gene re-arrangement study was negative. A diagnosis of pseudolymphoma with T-cell predominance was made. An additional biopsy specimen from the nose revealed dense nodular perivascular lymphoid cell infiltration in the dermis. In juxtaposition were nodular granulomatous infiltrates with numerous variably sized cystic structures (Fig. 2b). The granulomatous infiltrate was composed of epithelioid histiocytes, multinucleate giant cells and some lymphocytes. Further work-up uncovered no palpable lymphadenopathy. The patient's physical examination showed no other abnormalities. Treatment with triamcinolone acetonide injection (5 mg/ml) was initiated, and the lesions improved with three injections. No adverse effects were observed. The lesion had not recurred after 24 months of follow-up.

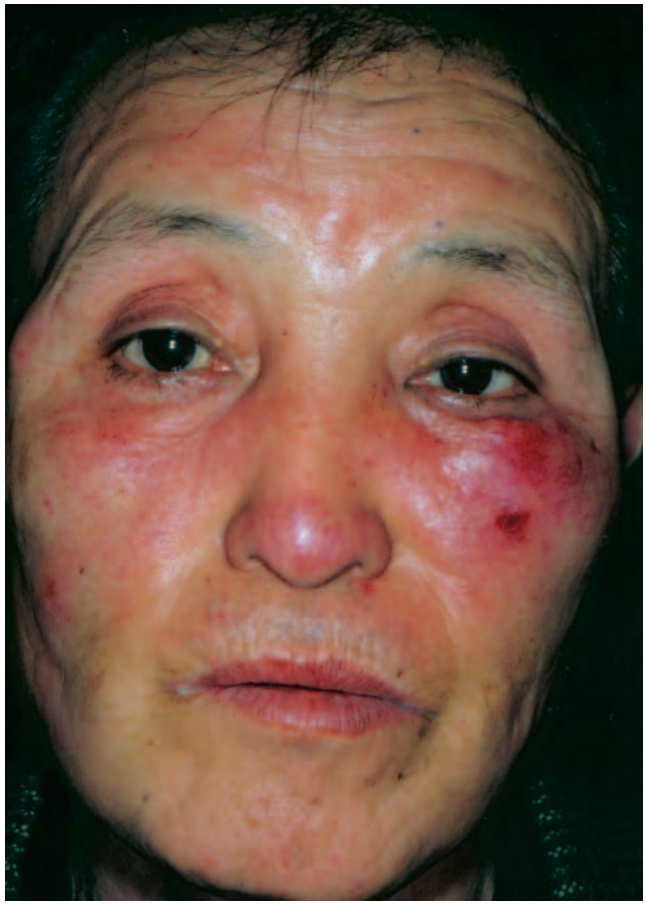

Fig. 1. Erythematous indurated plaque on the nose and both cheeks (publication of unmasked photo agreed by the patient).

DISCUSSION

Silicones are a family of polymers that comprise an alternating silicone-oxygen atom background. Variation of the chain length and cross-linking of chains results in different products (2, 3). Liquid silicone is made from short chains, and gels are made from longer chains; if the chains are cross-linked, formation of silicone elastomer is achived (2, 3). Silicone elastomers are found in implanted prosthetic devices, intravenous fluid tubing and contact lenses (2, 3). The silicone gel in bag implants has been used in breast cosmetic surgery (2, 3). Liquid silicone has been used for skin augmentation, to fill up wrinkles, lips and acne depression scars (2, 3).

Silicones are easily detected in tissue as small round-to-irregular translucent droplets of amorphous refractile non-polarizing material (4, 5). Although the picture of silicones in tissue sections is rather typical, the chemical

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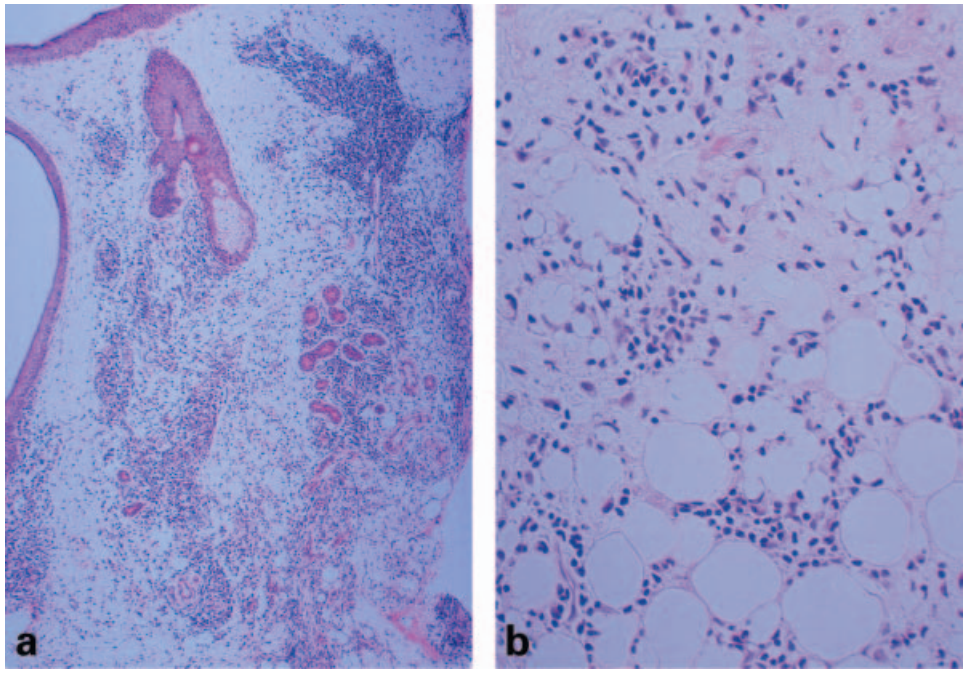

Fig. 2. (a) Dense nodular perivascular lymphoid infiltration in the dermis (H&E, ×95). (b) Variably sized cystic structures and lymphocytic infiltration in the deep dermis (H&E, ×375).

identity can be confirmed by infrared imaging spectroscopy or Fourier transformation infrared spectroscopy, electron microscopy coupled with energy dispersive ray analysis, or even more complicated techniques (4, 5).

In our case the proximity of cutaneous pseudolymphoma to a silicone-induced granulomatous reaction suggests a relationship between the development of pseudolymphoma and silicone injection. This complication is extremely rare and to our knowledge has not been reported before. Topical or intralesional steroid, cryotherapy, interferon-alpha, thalidomide, immunosuppressive agents, local radiation and surgical excision have been reported as successful treatments for pseudolymphoma (1). In our patient, the lesions responded to intralesional injection of triamcinolone.

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