Jessner’s lymphocytic infiltration of the skin (JLIS) is a skin disorder characterized by persistent papular and plaque-like eruptions (1). Although remission usually occurs spontaneously, JLIS has been known to have a high rate of relapse. The cause is unknown and can be hereditary. Rather than an independent disease, it has been suggested that JLIS may be a progressive stage of cutaneous lupus erythematosus or chronic primary T-cell lymphoma (2). Management can be performed in many different ways. We describe here 2 cases with lymphocytic infiltrate of the skin, which underwent complete regression after treatment with topical glucocorticoid or tacrolimus.

CASE REPORTS

Case 1. A 45-year-old woman had developed a solitary pea-like erythematous papular lesion on the left upper eyelid 2 months previously, which, although it had developed rapidly to a size of 30 × 35 mm (Fig. 1a) over a period of a few days, was completely asymptomatic in all other regards. Physical examination demonstrated a diffused tumid erythema on the left eyelid, which was soft on palpation. The patient had no history of any other disease. There was no evidence of systemic involvement. No lymphadenectomy had been detected. Serological studies showed no abnormality, other than being positive for anti-nuclear antibody, with a titre of 1:1000. Histopathology revealed regular epidermis, with a dense perivascular and perineural infiltration of lymphocytes in the dermis (Fig. 1c). PCR analysis showed no significant lymphocyte gene rearrangement. Immunohistochemical examination revealed CD3, CD3ε T cells (Fig. 1e, f) assembled in the dermis, negative CD20, CD79, along with less than 5% positive Ki-67 (Fig. 1d). On the basis of these examinations, the diagnosis of Jessner’s lymphocytic infiltrate of the skin was confirmed.

Treatment was commenced with topical applied tacrolimus ointment twice a day. The lesion began to recess after 2 days, and in the following 2 weeks the lesion gradually regressed to a pink macule (Fig. 1b). The patient remained symptom-free during the course of treatment. There was no recurrence in more than 5 months of follow-up.

Case 2. A 24-year-old woman presented with oedematous erythematous plaque on the right eyelid (Fig. 2a) with pruritus for 2 months. During this time, the lesion gradually progressed to reddish and expanded without effusion. No evidence was found that the lesions resulted from photosensitivity. Physical examination showed a scaly erythematous infiltrated plaque that involved only her right eyelid. In addition, oedema of the cheeks and swollen submaxillary lymph nodes was observed. Serological examinations showed leukocytopenia and neutropenia, antinuclear antibodies remained negative, but immunoglobulin E (IgE) was slightly increased. Lymphadenectomy of the neck and parotid were revealed by colour Doppler ultrasound. Histological examination revealed a dense lymphocytic infiltration in the dermis with no change in the epidermis. Immunohistochemistry staining revealed lymphocytic aggregates for CD3+, CD8+, CD2+, and CD5+ T cells (Fig. S1a–d; available from: http://www.medicaljournals.se/acta/content/?doi=10.2340/00015555-1554) in the dermis, in addition to a rate of Ki-67 less than 10% (Fig. S1e). Moreover, suspicious gene-rearrangement of T-cell receptor-r (TCR-r) was not observed. In short, the pathological and clinical findings suggested LIS. Treatment with mometasone furoate ointment once daily was commenced. Limited relief from the lesions was obtained in the following 5 days. However, a relapse, manifesting as diffuse...
erythema and a tumid right eyelid, was noticed on the sixth
day (Fig. 2b). We therefore changed treatment to mometasone
furoate ointment twice daily. Complete regression of the lesion
was attained after 2 weeks; and no lymph nodes were palpable.
The patient had no recurrence during one year of follow-up.

DISCUSSION

The aetio-pathogenesis of JLIS is yet unclear; it is de-
batable whether it is a single entity or a heterogeneous
group that can alter to polymorphous light eruption,
discoid lupus erythematosus, or even malignant lymph-
oma (3, 4). Plenty of researchers have indicated that
JLIS should not serve as an independent entity, but as
a variant of cutaneous lupus erythematous; although
evidence to support this hypothesis is lacking (5). In
addition, in some cases, lymphocytic infiltration of
the skin and polymorphous light eruption can occur
simultaneously. It is reported that JLIS occasionally
represents clinical manifestations of Borrelia-associ-
ated pseudolymphoma (6). Typically, the lesions are
flat discoid, elevated, and pinkish to reddish-brown,
starting as diffuse papules; there may be only one or
numerous lesions. JLIS presents mostly on the face,
but also on sites exposed to the sun, such as the neck,
upper trunk or proximal limbs of middle-aged adults.
Interestingly, these 2 cases show certain typical and
similar sites, eyelid and a part of the cheek, the only
dissimilarity being the difference between the right
and left sides. We did include the possibility of sun-
exposure; however detailed history-taking revealed
no relevant sun exposure related issues. Histological
examination revealed a dense lymphocytic infiltrate in
the dermis with no modification of the epidermis. The
distinguishing features of JLIS from polymorphous
light eruption and discoid lupus erythematosus are sup-
pressor CD8+ T infiltration lymphocytes and absent
dermal mucin and oedema.

Management options are diverse; most are useful, but
patients do not respond to all options in the same way.
Tacrolimus is an immunosuppressive drug that is used
mainly to reduce the activity of the patient’s immune
system. Tacrolimus is also used as a topical preparation
in the treatment of variety of skin conditions. Topical
and systemic glucocorticoid is traditionally used, but is
not very effective in most cases. The first patient was
treated successfully with topical tacrolimus ointment.
The second patient was managed satisfactorily with a
simple topical glucocorticoid ointment. Immunosup-
pressors, such as methotrexate, have been applied suc-
cessfully in LIS; the antimalarial always work on some
of those photosensitive cases (7). However, for some
persistent and refractory LIS lesions, radiotherapy can
be used; pulsed-dye laser and photodynamic therapy
have also been reported recently (8). In the cases de-
scribed here, topical tacrolimus exerted a therapeutic
effect. Further long-term study will determine whether
there have been any relapses or deterioration.

The authors declare no conflicts of interest.

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Fig. 2. An erythematous papule on the right eyelid
(a) before and (b) after 2 weeks of treatment with
mometasone furoate.