the patient to develop the vasculitis observed few months later with FU/LV. In conclusion, both reports emphasize the need to be aware of this unusual but, if promptly recognized, self-limiting toxicity of 5-FU/LV, either when administered as a monotherapy or when combined with oxaliplatin.


1Policlinico Militare di Roma Celio, Department of Medical Oncology, Piazza Celimontana, 50 - 00184, Rome, Italy
2Department of Dermatology, Policlinico Militare di Roma Celio, Rome, Italy
3Department of Pathology, Policlinico Militare di Roma Celio, Rome, Italy
4Department of Medical Oncology, Policlinico Militare di Roma Celio, Rome, Italy

Federico PELLEGRINI1
Stefano ASTORINO2
Nadia CASTALDI1
Flavia FASSONE1
Paola PASQUINI3


doi:10.1684/ ejd.2010.1117

Lichen ruber planus following connective tissue massage

A 47-year-old man presented tiny, flat, arch-arranged, flesh-colored papules on the right chest, associated with itching (figure 1A). The lesions had a three-month history and arose 15 days after a connective tissue massage on the trunk for an occasional low back pain. The massage was performed without the application of any oil, cream or any substance injection. He took no drugs. The patient’s medical history was unremarkable. Standard blood and serum exams were all normal; antinuclear, extractable nuclear antigens, hepatitis A, B and C antibodies were also normal or absent.

A 4-mm punch biopsy was taken from a papular lesion and histology showed acanthosis, focal and mild thickness of the granular layer, basal layer vacuolization with detachment of the epidermis from the dermis and a band-like infiltrate of lymphocytes at the epidermo-dermal junction, as in lichen ruber planus (figure 1B). An immunohistochemistry assay showed a cellular infiltrate, mostly composed of T cells (about 80%). No other cutaneous or mucosal signs of lichen ruber planus were evident. 15 days after the biopsy the lesions cleared up completely with no treatment, without hypopigmentation and after 1 year of follow up no relapses were seen (figure 1C).

Lichen ruber planus (LRP) is a very common dermatosis of unknown pathogenesis, which has been associated with various diseases (hepatitis, diabetes, alopecia areata, ulcerative colitis, etc.) [1]. It should be differentiated from lichen striatus, which is more often noted in children and is self-limiting [2]. The skin sample of our patient showed the histopathological features of LRP. In lichen striatus, the key features are the presence of scattered dyskeratotic cells in the upper layers of the epidermis, acanthosis, parakeratosis, minimal spongiosis, with lymphocytic perivascular infiltrate limited to the upper dermis. Even if in some phases the two pathologies have similar histology and cannot be histologically distinguished, our case could be considered a linear lichen ruber planus because of the patient’s age. Furthermore, the Koebner phenomenon is well known in lichen ruber planus but not in lichen striatus [3]. Blaschkitis was excluded due to the histological pattern of spongiosis and absence of lichenoid features [4]. The link between connective tissue massage and appearance of the lesion is not clear. Connective tissue massage deals with the skin and subcutaneous tissue, focusing on definite regions of the body, assigned in segmental order to inner organ systems and the spinal cord, joints and muscles. The massage could cause local vasodilatation, or unmask superficial antigens of basal keratinocytes.

Although the massage was performed bilaterally, the lichenoid eruption was unilateral, on the right chest. Maybe a genomic mosaicism caused by autosomal muta-

Figure 1. A) Tiny, flat, arch-arranged flesh-colored papules on the right chest; B) basal layer vacuolization and a band-like infiltrate of lymphocytes at the epidermal-dermal junction; C) 15 days after the biopsy.
tion during skin embryogenesis could make basal keratinocytes in the involved side capable of mechanical damage caused by connectival massage. The spontaneous resolution of skin lesions after biopsy could be chance or due to the biopsy itself. In the literature, regression of various dermatitis is reported after skin biopsy and in granuloma annulare it can be a therapeutic option [5].

It is not clear how biopsy leads to lesion improvement or lesion healing. In granuloma annulare, physical injuries like biopsies can induce keratinocytes and melanocytes to release cytokines and subsequent infiltration of inflammatory cells in the site involved. In particular, T cell subsets can be recruited or eliminated. T cells can interact bidirectionally with fibroblasts, through production of several modulating factors, enhancing the immune and scarring response [6]. In our case, T lymphocytes were the predominant cell type in the inflammatory infiltrate. Psychological conditions may also be involved in the spontaneous regression of skin diseases. Further investigations may show the exact relation between skin biopsy and lesion resolution and reports of new cases will prove the cause-and-effect link.


1. Dermatology Unit, University of Rome “Sapienza”. II School of Medicine, S. Andrea Hospital, Via di Grottarossa 1035, Rome, Italy
2. Student of II School of Medicine, S. Andrea Hospital, Via di Grottarossa 1035, Rome, Italy
3. Dermatology Unit, Azienda Ospedaliera Matera, Italy
<elenamari4@virgilio.it>

Guglielmo PRANTEDA1
Elena MARI1
Diego ORSINI2
Giulia PRANTEDA2
Chiara ASSORGI2
Miriam GRIMALDI3


Systemic absorption of sodium cromoglicate from a new cutaneous emulsion (Altoderm®) in children with atopic dermatitis

Our objective was to determine the systemic absorption of sodium cromoglicate (SCG) in subjects with atopic dermatitis, being treated with a new cutaneous emulsion (Altoderm®). Altoderm is a 4% w/w concentration of SCG in a novel emollient base designed to enhance the skin penetration of SCG [1].

Nine subjects with atopic dermatitis, who had been using Altoderm for at least 3 months, were selected. Seven were aged 3 to 7 years, one 14 years and one aged 26. The protocol was approved by the Isle of Wight, Portsmouth & SE Hants Local Research Ethics Committee, UK. All parents or patients gave informed, written consent. Subjects applying Altoderm twice daily to affected areas of skin collected a 24 hour specimen of urine during a 6 day period. They emptied their bladder in the morning, applied the cutaneous emulsion, and then collected all urine passed until before the application of emulsion the next morning. They weighed the Altoderm container before and after each application. The 24 hour collection was delivered to the clinic that day: total amount measured immediately and a 100 mL aliquot taken and stored at 4 °C. The determination of the amount of sodium cromoglicate in the aliquots was undertaken using a validated HPLC method.

Table 1A shows age, body surface area, amount of SCG applied in mg/24 hours, and amount of urine collected over 24 hours. Table 1B shows the concentration of SCG in the aliquot sample, the amount of SCG excreted in the urine in μg/24 hours, the percentage systemic absorption of SCG and the amount absorbed based on body surface area. The mean amount of Altoderm applied each day was 7.78 ± 5.31 g (Range 3-20 g). The mean percentage of SCG absorbed was 1.46 ± 0.91% (Range 0.03-2.68%).

Systemic absorption of SCG is low. Absorbed drug is not metabolised and is eliminated within 24 hours. The amount of SCG excreted in the urine over 24 hours represents 50% of the amount absorbed [2]. A previous study in atopic dermatitis, using a 4% concentration of SCG in oil in water cream measured the amount of SCG in 24-hour urine specimens [3]. They reported absorption of 0.44 ± 0.02% (mean ± SE). The mean absorption from the 4% cutaneous emulsion we used was therefore 3 times greater than that from the 4% cream used in that study. This may have implications for both the efficacy and safety of the product used.

The safety of sodium cromoglicate in respect of systemic exposure was determined using the inhaled route in man. It is described in detail in a review by Cox et al. [4]. Pharmacokinetic studies that have been undertaken using this system, have shown that, on average, 12% of the inhaled dose is deposited in the respiratory tract, but it can be as high as 17.1%. That proportion of the drug reaching the respiratory tract is absorbed. The remainder is swallowed, of which up to 1% is absorbed [5]. The maximum approved dose via inhalation is 2 × 20 mg, four times daily or 160 mg/day. Assuming that up to 18% of this could be absorbed systemically; this would give an upper limit for daily systemic exposure of 28.8 mg/day. In our study, taking the maximum figures recorded, 20 g of Altoderm lotion (800 mg SCG) applied per day and 2.68% absorption, this would give a potential of 21 mg of SCG absorbed/day, below that approved for inhalation use.

We conclude that there are no safety implications in the clinical use of the new cutaneous emulsion in patients due