Letter to the Editor

Bowen's disease in a renal transplant recipient treated with a single application of topical imiquimod: severe adverse skin reaction with favourable clinical outcome

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Dear Editor,

The immunosuppressive regimens necessary for the survival of an allograft increase the rates of cutaneous malignancies in renal transplant recipients (RTRs), who experience significant morbidity from Bowen's disease (BD), invasive squamous cell carcinoma and basal cell carcinoma (BCC) (1). In these patients, occurrence of multiple lesions and an aggressive clinical course with an increased risk of local recurrence and metastasis requires careful clinical monitoring and poses significant treatment challenges.

We report on a 73-year-old female with BD that completely regressed after a severe localized cutaneous reaction induced by a single application of imiquimod. The patient, who 11 years ago had received a kidney transplant, was referred to us in April 2006 for an occasionally itchy, progressively enlarging erythematous-desquamative plaque of nine months' duration measuring 12 × 10 cm, located in right side of upper anterior chest wall (Fig. 1a). In this site, she had had two different lesions surgically removed in 2001 and 2003, which on histological examination proved to be BD with clear margins. At the time of referral, the patient presented also a smaller (2 × 1.5 cm), round-shaped, slightly infiltrative scaly erythematous plaque on the upper right arm (Fig. 1a). The biopsies taken from the clavipectoral region and from the arm revealed the features of BD and superficial BCC, respectively. Local treatment with 5% imiquimod cream was started on both lesions. Two days after the first and only application, the patient presented with a tender, inflamed and necrotic plaque in the clavipectoral region, while no erythema was present in the BCC area (Fig. 1b). No systemic side effects were observed. Imiquimod treatment of the BD area was stopped and replaced with 0.1% gentamicin ointment twice per day. As planned, the patient continued on the application of imiquimod in the BCC area 5 days per week, which resulted in resolution of the existing lesion over 6 weeks without any relevant side effect. At that time, a complete clinical clearance and a good cosmetic outcome of the BD lesion (Fig. 1c) was observed. No recurrence of either lesion was noticed during the 4-year follow-up. Unfortunately, the patient died in 2010 for reasons unrelated to the treatment with imiquimod.

Although limited, data has begun to accumulate on the safety and efficacy of imiquimod for the treatment of skin cancer occurring in RTRs (2). Mild local skin reaction in the application area, which is the most commonly reported adverse reaction, seems to be similar in intensity but delayed in appearance and less frequent when compared to non-RTR immunocompetent patients (3). Brown et al. suggested that this particular clinical course might reflect a failure to recruit the effector cells needed to stimulate a therapeutic inflammation. In our patient, the strikingly rapid local reaction in the BD area and the absence of any inflammation in the BCC area might suggest that

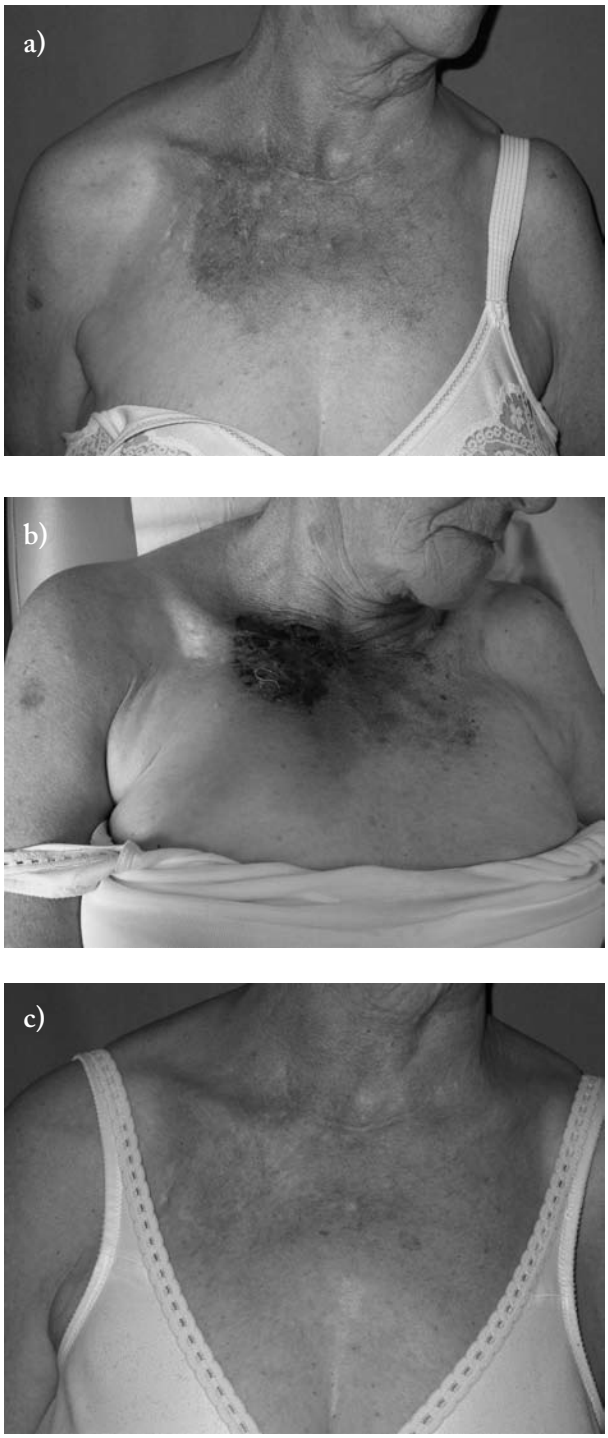

Figure 1. (a) Renal transplant recipient with a Bowen's disease plaque in the clavipectoral region and a basal cell carcinoma on the right arm. (b) Adverse skin reaction on the Bowen's area after a single application of 5% imiquimod cream. (c) Complete clinical clearance and good cosmetic outcome of Bowen's disease 6 weeks after a single application of imiquimod

the given disease and the region of the body involved might have influenced the local inflammation, rather than a reduced ability of immunosuppressed RTRs to mount an immediate and appropriate inflammatory response to imiquimod. Overall, patients must be reassured about the good prognosis and satisfactory cosmetic outcome even when faced with a severe localized cutaneous reaction, which occurs in immunocompetent patients (4) as well as in RTRs (5). So far, the efficacy of imiquimod treatment for BD in RTRs has only been reported in two small case series (5,6). In one, five patients were successfully treated with imiquimod three times weekly in combination with 5% 5-fluorouracile cream applied daily for 7-9 weeks (6). In the other report, two RTRs were treated with imiquimod monotherapy every second day. Similar to our case, one of these patients was not able to continue with the planned therapy for 6 weeks, because of an intense inflammatory reaction with crusting and haemorrhagia appeared after only four applications, therefore treatment with imiquimod was stopped. Nevertheless, the BD healed without scar formation and there was no recurrence during the 6-month follow-up. In our case, a single application of imiquimod was able to induce a regression of BD. In addition, imiquimod treatment effectively suppressed the appearance of any new lesions over a prolonged follow-up period. The occurrence of locally recurrent BD in sun-damaged areas could be due to the presence of subclinical lesions that were not identified and removed by excision, as might have happened to our patient. One might speculate that imiquimod treatment might have acted as a field-directed therapy, which is supposed to remove subclinical lesions as well as those clinically visible (1). To the best of our knowledge, this is the first case of BD in an RTR successfully treated with a single application of imiquimod.

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