



## CORRESPONDENCE

## Treatment of multiple Bowen's disease with squamous cell and basal cell carcinomas with oral acitretin combined with excision



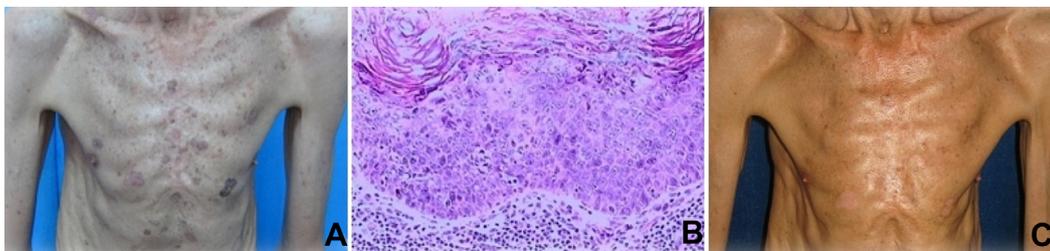
Dear Editor,

A 61-year-old man presented with a 13-year history of multiple brown plaques all over his body. He had been feeding chickens for 16 years, and was often scratched or pecked in the upper limbs. Some lesions developed with a definite history of injury. Others around him who were feeding chickens did not have similar skin damage. The patient had suffered from several systemic diseases, such as chronic bronchitis and gastritis, for many years and took antibiotics and traditional Chinese medicine intermittently. The patient acknowledged occasional contact with farm chemicals, but denied any contact with coal tar. No source of arsenic was identified. Dermatological examination revealed about 40 brown macules and plaques distributed diffusely on his trunk and extremities (Figure 1A). There was a hard oyster shell-like nodule on the back of the right thumb. A black neoplasm 2 cm in diameter with a smooth but uneven surface was found on the scalp (Figure 2A). The patient's urine sample was within the normal limit for arsenic, with a level of 0.676  $\mu\text{g/L}$ . Histopathological examination showed that the brown plaque on the left chest was consistent with Bowen's disease (Figure 1B), the nodule on the right thumb was a well-differentiated squamous cell carcinoma, and the black neoplasm on the scalp was a basal cell carcinoma (Figure 2B). The squamous cell carcinoma was excised and a skin graft was done. Other lesions were treated with oral acitretin, 30 mg daily. Vitamin E, 100 mg twice a day, was prescribed to alleviate dryness. Most rashes were almost completely eradicated 10

months later (Figure 1C). No recurrence was found on the skin graft area. The basal cell carcinoma on the scalp had regressed by 70% at 6 months after the initiation of treatment (Figure 2C), but gradually increased in size to 50% of the initial size over the following 4 months (Figure 2D). The remainder was removed surgically. The treatment regimen was well tolerated by the patient. The only adverse effect reported was mild dryness of the mouth, eyes, and skin. The acitretin treatment was discontinued after a total of 10 months. There has been no recurrence of the resolved lesions in the 22 months following the discontinuation of therapy.

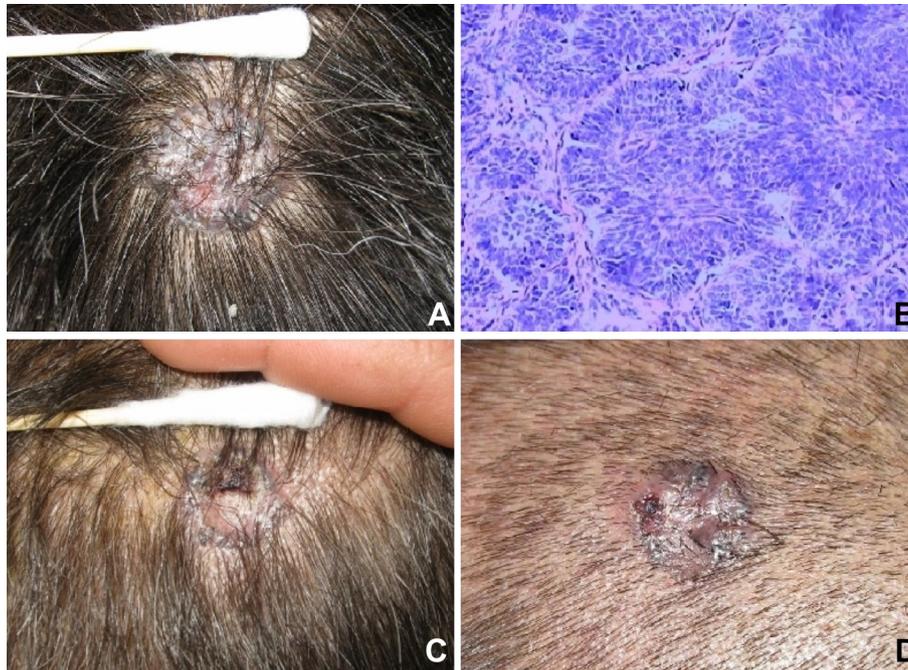
Multiple Bowen's disease is usually induced by arsenic ingestion, chronic sun damage, or human papillomavirus infection.<sup>1–3</sup> In our patient, although no source of arsenic was identified and the urine sample was within the normal limits for arsenic, chronic exposure to arsenic cannot be excluded because hair or nail were not tested for arsenic. The patient was often scratched or pecked in the upper limbs during the feeding of chickens, and some lesions developed with a definite history of injury. We speculate that chronic mechanical damage may have contributed to the occurrence of multiple Bowen's disease in our patient, which has seldom been reported.

Common treatments for multiple Bowen's disease are excision, CO<sub>2</sub> laser therapy, liquid nitrogen cryotherapy, photodynamic therapy, and topical imiquimod.<sup>1–3</sup> These are all localized therapeutic options. In some cases, retinoid combined with another treatment has been used.<sup>4,5</sup> In our patient, given his poverty and the large number of lesions, a trial of systemic retinoid alone was



**Figure 1** Multiple Bowen's disease. (A) Multiple brunneus macules and plaques distributed diffusely on his trunk; (B) the cellular architecture of the epidermis is disorganized and the atypical epidermal keratinocytes show variation in size and staining. However, the basement is intact and (C) after 10 months of treatment with acitretin, most rashes were almost completely eradicated. (B, hematoxylin-eosin stain; original magnification  $\times 100$ .)

Conflicts of interest: The authors declare that they have no financial or non-financial conflicts of interest related to the subject matter or materials discussed in this article.



**Figure 2** Basal cell carcinoma. (A) A black neoplasm on the scalp; (B) basaloid cell clump-like cell mass in the dermis, at the periphery of which are columnar cells; (C) the neoplasm had regressed by 70% 6 months after the beginning of acitretin treatment; and (D) it gradually increased in size to 50% of the initial size in the following 4 months. (B, hematoxylin-eosin stain; original magnification  $\times 100$ .)

undertaken. Significant improvement was observed. For the treatment of patients suffering from multiple Bowen's disease, our observations provide an alternative regimen that has many advantages, such as little pain, low cost, and ease of administration. We suggest a larger trial of acitretin with long-term follow-up to verify its efficacy.

There have been reports that the use of retinoids is effective for the treatment of squamous cell carcinoma.<sup>6</sup> Patients at high risk for the development of cutaneous malignancies, including patients with xeroderma pigmentosum, psoriasis treated with psoralen-UVA, and those undergoing organ transplantation, have developed fewer cutaneous squamous cell carcinomas while receiving long-term or continuous therapy with retinoids.<sup>6,7</sup> Thus, we speculate that in our patient, oral acitretin may have provided benefits in preventing a recurrence of squamous cell carcinoma after surgical excision. This needs to be confirmed by larger, long-term trials.

It has been reported that combined acitretin and imiquimod was effective in treating basal cell carcinoma.<sup>8</sup> However, others found that basal cell carcinoma did not respond to isotretinoin and interferon alfa.<sup>4</sup> In our patient, given acitretin alone, the basal cell carcinoma regressed, but did not disappear. Thus, it appears that retinoids may not be as effective in treating basal cell carcinoma as in treating multiple Bowen's disease. Nevertheless, acitretin produced a marked reduction in the tumor mass in our patient, which facilitated its surgical excision.

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