Case Report

Bowen's Disease of the Palm and Its Management with In-step Graft

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Abstract

Bowen's disease is an *in situ* squamous cell carcinoma of the skin, commonly seen in the elderly, on sun-exposed areas. Although it can occur on any site of the body, the involvement of glabrous skin is rare. Bowen's disease of hand is very rare, only a few cases are reported and none of them is managed surgically with immediate reconstruction. Through this article, we present a case of Bowen's disease of the palm managed by oncologically safe excision and cosmetic reconstruction by in-step graft.

Keywords: Bowen's disease, in-step graft

Key Messages: Bowen's disease of the palm is rare. Surgery is preferred and curative management. Reconstruction by instep graft is cosmetically sound and replaces glabrous skin with well-hidden donor scar

Introduction

Bowen's disease is a neoplastic skin disease, named after John T Bowen, also known as squamous cell carcinoma *in situ*/intraepidermal squamous cell carcinoma. Chronic sun exposure, immunosuppression, AIDS, HPV infection, and other dermatoses are common risk factors.[1] It commonly occurs after 60 years and women are more affected (70–85%). The disease develops as a gradually enlarging, well-demarcated, flat, erythematous, scaly, or crusted patch of irregular borders. Bowen's disease of the skin can occur anywhere on the body including mucosal surfaces. However, approximately 60%–85% cases present with the lesion on a lower limb on sun-exposed areas, palm and sole being the rare sites affected by Bowen's disease.[2]

Bowen's disease of the hand is rare, of the reported cases most are seen on the dorsum of the hand. Through this article, we present a rare case of Bowen's disease of palm, managed by oncologically safe excision and cosmetic reconstruction using glabrous skin from the in-step area of the foot.

Case Report

A 32-year-old housewife, presented with complaints of gradually increasing, scaly patch on the left palm for 4 years. On examination, a well-demarcated, irregular, flat, reddish-brown, scaly, crusted, lesion of 6.5 cm × 5 cm was found on the ulnar half of the palm [Figure 1]. The lesion was nontender, non-adherent to the deeper structures, and without any distal neurovascular deficit. Biopsy showed anaplasia of epidermis, vacuolization, multinucleated cells, and large, pale and nested pattern of keratinocytes with abundant ground glass cytoplasm, without dermal invasion [Figure 2].

The patient was explained about the disease and management modalities. She opted for surgical treatment. The lesion was excised under tourniquet control and loupe magnification with a 3 mm margin, preserving the palmar fascia and other vital structures [Figure 3]. The margin of resection was confirmed by frozen section. The skin defect was reconstructed by a glabrous skin graft from the in-step area of the foot for a cosmetic matching. The graft donor area was marked over the instep of the left sole; the tumescent solution was injected to obtain an elevated

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flat surface for ease of harvesting the graft [Figure 4]. Split thickness skin graft was harvested and sutured in the defect followed by dressing and hand splinting [Figure 5]. Postoperatively graft had taken completely with excellent color and texture match [Figure 6]. Long term results were satisfactory without any functional deficits.

Discussion

Bowen's disease is also known as intraepidermal squamous cell carcinoma (SCC) or SCC carcinoma *in situ*. Chronic sun exposure, arsenic poisoning, ionizing radiation, human papillomavirus (HPV) infection, and immune suppression are known risk factors. The disease commonly presents on sun-exposed parts of the skin. Although it can occur anywhere on the body, including genitalia, mucosal surfaces, and corneoscleral junction, it is rare on palm and soles. It affects the elderly and appears as a single, gradually enlarging, and erythematous plaque of irregular but well defined maculopapular lesion.[3]

Figure 1: A well demarcated brownish scaly crusted patch on the ulnar half of the palm

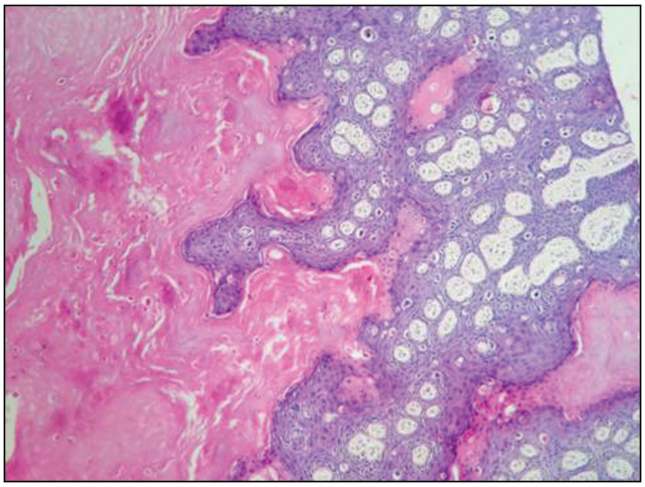

Figure 2: Squamous epithelium showing acanthosis, hyperkeratosis with full-thickness atypia without dermal invasion

Differential diagnosis includes tinea corporis, nummular eczema, seborrheic keratosis, extramammary Paget disease, superficial basal cell carcinoma, Squamous cell carcinoma, actinic keratosis, Lichen simplex chronicus, and psoriasis.[4] A skin biopsy is required to confirm the diagnosis. An ideal method of treatment should be chosen according to size, site, associated systemic involvement, functional and cosmetic impairment, patient preferences, and facilities available.

Figure 3: Post-excisional defect with preservation of palmar aponeurosis

Figure 4: In-step graft marking

Figure 5: Graft sutured over the defect

Figure 6: Graft at the end of 4 years showing excellent color and texture match with reappearance of dermatoglyphic pattern

Various treatment options include topical antineoplastic drugs, immune-modulatory drugs, radiation, laser therapy, cryotherapy, cauterization, diathermy coagulation, photodynamic therapy, and surgical excision.[5-8] As the disease is potentially malignant with a malignancy rate of approximately 3–5%, surgical management, if possible, is always safer. Surgery is the preferred and curative management in medically and surgically fit patients. Although safety margin is not described well, a retrospective study on 218 patients conducted by Annet *et al.*[9] showed 3–5 mm was associated with 87.0%–94.4% clearance. Mohs micrographic surgery is an excellent method for large, recurrent, poorly demarcated lesions, on the face, periocular area, nose, digits, and genital area. It gives 100% margin clearance and hence no risk of recurrence or malignancy[10]

As the lesion was large, long-standing, and was present on the working surface of the hand, any impaired wound healing, ulceration, potential recurrence, and/or malignancy was likely to be associated with significant functional impairment of the hand. We preferred surgical excision with a conventional margin and primary reconstruction by instep graft as a treatment option. We chose the instep as a graft donor site as the skin texture was similar, graft harvest caused minimal morbidity and the donor scar was very well hidden.

Conclusion

Surgical management of Bowen's disease is always a safe option due to the risk of malignant transformation. Our article presents a rare case of Bowen's disease of palm, managed oncologically safe and cosmetically sound and function preserving surgery.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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