BOWEN'S BLOWN AWAY! - SUCCESSFUL MANAGEMENT OF BOWEN'S DISEASE BY TOPICAL 5% 5-FU AND CRYOTHERAPY

ABSTRACT

BACKGROUND: Bowen disease (BD) is a rare, persistent, and progressive form of in situ Squamous Cell Carcinoma characterized by a solitary, red, scaly or crusted plaque with potential for malignant change around 8%. Persistent growth usually occurs but partial regressions are not uncommon. Several modalities of treatment are available which show varying results. In our Case Report, we present a 74-year-old male who was diagnosed with Bowen's Disease clinicopathologically and was treated with cyclical topical 5% 5-FU cream and Cryotherapy using Liquid Nitrogen.

CASE DESCRIPTION: A 74-year-old male came to our OPD with complaints of a single, persistent, asymptomatic psoriasiform plaque of size measuring 4x4 cm over his abdomen for 3 years. The plaque was progressively enlarging and showed resistance to topical therapies with salicylic acid, potent topical steroids, and emollients for the past 3 years. A clinical diagnosis of Bowen's Disease was made, and biopsy was done. Histopathological Examination revealed intra-epidermal dysplasia with characteristic 'wind-blown' appearance of keratinocytes in the epidermis. Atypical mitotic figures were seen. Dense lymphocytic infiltrate with pigment laden macrophages were seen at DEJ. Patient was started on topical 5% 5-Fluorouracil (5-FU) cream which he applied three nights a week along with Cryotherapy using Liquid Nitrogen (8 sessions of cryotherapy with two 5-10 secs Freeze-Thaw cycles were done at 3 weekly intervals). Biopsy taken at end of 6 months showed a normal epidermis with no evidence of in situ changes. Next evaluation will be after 3 months.

CONCLUSION: There are multiple treatment modalities available for BD with no option superior to other. 5% 5-FU is showing increasing effectiveness (up to 96.2%) especially when combined with other treatment options such as cryotherapy which on its own showed great clearance rates (greater than 90%) depending on the duration of freeze-thaw cycles. Main advantage of this combination is its ease of application, low cost and non-invasiveness.

KEYWORDS

Bowens, SCC, 5-FU, Cryotherapy

INTRODUCTION

Bowen's Disease (BD) is an intraepidermal or in situ Squamous Cell Carcinoma. It was first described by John T Bowen in 1912 after whom its' named [1]. It typically affects individuals older than 60 years and rarely before 30 years affecting men and women equally. However, some studies have shown an increased preponderance towards women. Potential for malignant change is around 8%. Lesions are usually solitary but multiple lesions can occur in 10-20% of patients. It usually presents as a discrete slowly enlarging scaly erythematous to salmon red plaque which is well circumscribed and ill-defined. They may be few millimetres to several centimetres in diameter eventually becoming hyperkeratotic, crusted and fissured. Ulceration can occur and may be a sign of malignant transformation. Persistent growth usually occurs but partial regressions are not uncommon. Several modalities of treatment are available and show varying results.

In our Case Report, we present a 74-year-old male who was diagnosed with Bowen's Disease clinicopathologically and treated with 5% 5-FU topically and Cryotherapy using Liquid Nitrogen.

CASE DESCRIPTION

A 74-year-old male came to our OPD with complaints of a single, persistent, asymptomatic psoriasiform plaque of size measuring 4x4 cm over his lower abdomen for 3 years [FIG 1]. Patient was getting treated elsewhere for discoid eczema / psoriasiform dermatitis. The plaque was progressively enlarging and not responding to topical therapies with salicylic acid, potent topical steroids, and emollients for the past 3 years. Based on the history and clinical examination, a provisional diagnosis of Bowen's Disease was made.

A biopsy was taken and sent for histopathological examination. HPE revealed intra-epidermal dysplasia with characteristic ‘wind-blown’ appearance of keratinocytes in the epidermis. Atypical mitotic figures were also seen. Dense lymphocytic infiltrate with pigment laden macrophages were seen at DEJ.

FIG. 1 – Scaly plaque over lower abdomen

FIG. 2 – HPE showing wind-blown appearance of keratinocytes

Patient was started on cyclical topical 5% 5-Fluorouracil (5-FU) cream which he applied three nights a week along with Cryotherapy using Liquid Nitrogen. 8 sessions of cryotherapy with two 5-10 secs Freeze-Thaw cycles were done at 3 weekly intervals after which the lesion resolved [FIG 3]. Repeat biopsy taken at the end of 6 months showed a normal epidermis with no evidence of in situ changes [FIG 4]. Next evaluation will be done after 3 months.
Curettage with cautery is another safe and effective method and showed cure rates ranging from 50% to 100% by also using one to three 20s freeze-thaw cycles. Different studies have showed clearance rates ranging from 81% for curettage up to 93% to 98% with a follow up of 2.5 to 4 years. Curettage; destructive methods like Cryotherapy; and Photodynamic Therapy choice should be tailored on an individual basis considering size and thickness of lesion as well as the modality of treatment used.

CONCLUSION
Bowen's Disease has about an 8% chance of malignant transformation. Hence, we should always have a high index of suspicion and treat it as early as possible. There are multiple treatment modalities available for BD with no option superior to other. 5% 5-FU is showing increasing effectiveness (up to 96.2%) especially when combined with other treatment options such as cryotherapy which on its own showed great clearance rates (greater than 90%) depending on the duration of freeze-thaw cycles. Main advantage of cyclical topical 5% 5-Fluorouracil combination with Cryotherapy is its ease of application, low cost and non-invasiveness ensuring a good patient compliance and follow-up. However, erosions and ulcerations may occur which can be managed easily.

REFERENCES