İnönü Üniversitesi Tıp Fakültesi Dergisi
11(2) 93-95 (2004)

Bowen's Disease: An Uncommon Presentation

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Objective: Bowen's disease described by bowen originally in 1912 is an intradermal squamous cell carcinoma. We aimed to discuss a case of bowen's disease with uncommon presentation in the light of recent literature.
Observation a 65-year-old male presented with a lesion over the skin of the abdomen for 5-6 years duration. The lesion gradually enlarged over the years and was asymptomatic. It had been treated and misdiagnosed by different centers, which had resulted in partial regression; however, it started to enlarge again. Dermatologic examination revealed a plaque, 7cm×7cm in size, on the right side of the umbilicus. It was well defined, and erythematous, pigmented, with firm papules of various sizes at the periphery and center of the lesion. Histopathology showed that the lesion was extending through the whole thickness of the epidermis. The basement membrane zone was intact. Keratinocytes showed a loss of polarity and atypia. A diagnosis of "bowen's disease" was made, the lesion was surgically excised, and skin grafting was performed.
Conclusion: Bowen's disease should be considered when a skin lesion not responded to treatment or lesion mimics papulosquamous disorders.

Key words: Bowen's Disease, Skin, Dermatopathology

Nadir Yerleşimli Bir Bowen Hastalığı

Amaç:İlk olarak 1912'de Bowen tarafından tanımlanan bowen hastalığı bir intraepidermal yassı hücreli karsinomdur.
Olgu: 65 yaşında erkek hasta 5-6 yıldan beri karın cildinde bulunan lezyon ile başvurdu. Bu asemptomatik deri lezyonu aylar içinde ilerlemiş. Değişik merkezlerde yanlış tanı alan ve tedavi edilen lezyonda kısmi bir gerileme olmuş ancak tekrar büyümeye başlamış. Dermatolojik muayenesinde; göbeğin sağ tarafında, 7cm x 7cm boyutlarında, plak şeklindeki izlenen lezyonun iyi sınırlı, eritemli, pigmentli ve değişik büyüklükte papüller yapıların lezyonun periferine ve merkezine yerleşmiş olduğu izlendi. Histopatolojik muayenesinde; epidermiste kalınlaşma, bazal tabakanın sağlam olduğu, keratinositlerde polarite kaybı ile atipi izlendi. Bowen hastalığı tanısı alan lezyon cerrahi olarak çıkarıldı ve deri grefti konuldu.
Sonuç: Nadir yerleşimli Bowen hastalığı olgusunu ilgili kaynakların ışığında tartışarak sunmayı amaçladık.

Anahtar Kelimeler: Bowen Hastalığı, Cilt, Dermatopatoloji.

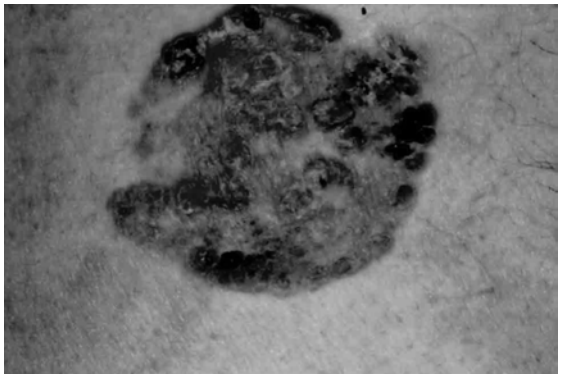
In 1912 and 1915, John T. Bowen described 3 patients with precancerous dermatosis.[1,2] Darier first called the lesion "Bowen's Disease" in 1914.[3] It represents a form of squamous cell carcinoma in situ that clinically presents an asymptomatic, elevated and crusted plaque on the skin.[4] The general histologic features consist of a full thickness loss of epidermal stratification (windblown appearence), great variability of nuclear size and depth of staining, occurrence of mitoses in all layers of living epidermis, and presence of atypical cells, some with multiple nuclei and dyskeratotic cells.[5] Bowen's disease usually consists of a solitary lesion. It may be caused by exposure to the sunlight, x-rays or ionizing radiation, and arsenic.[6]

CASE

A 65-year-old man was admitted to Diyarbakır Central Hospital Dermatology Polyclinic with complaints of an asymptomatic, crusted plaque over the skin located on the right side of the umbilicus persisting for 5-6 years. The lesion gradually increased in size over the years and was asymptomatic. Psoriasis, nummular dermatitis, tinea corporis were diagnosed and treated at different centers, which had resulted in partial regression; however, it started to grow

again. There was no preceding history of trauma, cold injury, or similar lesion elsewhere on the body. General examination revealed normal. Dermatological examination revealed an erythematous, yellow-white crusted plaque of about about 7x7 cm, with well defined borders, lying over the skin of the right side of the umbilicus. Noteworthy was the presence of keratotic and pigmented papules, and a focal pigmented border. Signs of atrophy, bleeding or lymphadenopathy could not be observed (Figure 1). There were no other similar Iesions on other parts of body. Routine laboratory investigations were normal. A differential diagnosis of pagetoid type of basal cell carcinoma, squamous cell carcinoma, Bowen's disease and superficial spreading melanoma were considered.

Figure 1. There is a crusted plague on the right side of the umblicus.



Histologic examination of the plaque showed that the epidermis was thickened, and there was hyperkeratosis and acanthosis with irregular elongation of the rete ridges. The border between the epidermis and dermis was sharp. The basal layer was invaded by chronic inflammatory infiltrate (Figure 2). The cells of the stratum malpighii were in complete disorder. Some of them were atypical with hyperchromatic nuclei, and a few others showed individual cell keratinization or dyskeratosis (Figure 3). Histopathologic examination of the plaque revealed Bowen's disease. The lesion was surgically excised, and free skin grafting was performed**.**

DISCUSSION

The morphology of Bowen's disease mimics other cutaneous disorders like psoriasis, lichen simplex chronicus, and other papulo-squamous disorders.[7] The disease itself is easily treated and has an exellent prognosis.[8] If untreated**,** 3% to 5% of patients may develop invasive carcinoma.[9] Histopathological classification of Bowen's disease is uncommon. Darier [2] classified the lesion into five types (lenticular, discoid, simple hyperkeratotic, invasive carcinoma). In 1980, Strayer and Santa Cruz [10] modified this classification and determined six groups (psoriasiform, atrophic, verrucous-hyperkeratotic, irregular, nesting patern, and other, including amyloid formation and mucinous or sebaceous metaplasia, and combinations of two or more types).

Figure 2. There is hyperkeratosis, acanthosis and a bandlike inflammatory infiltrate with irregular elongation of the rete ridges. The basement membrane zone is intact (HEx100).

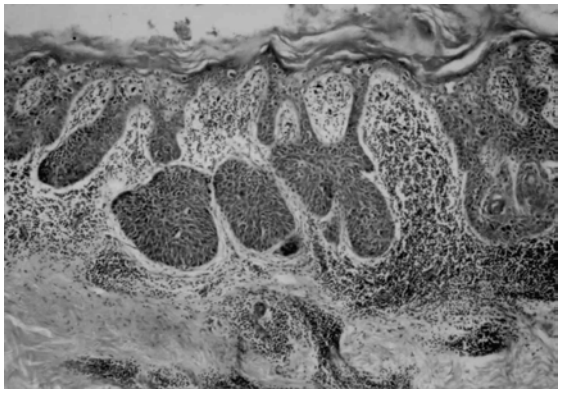
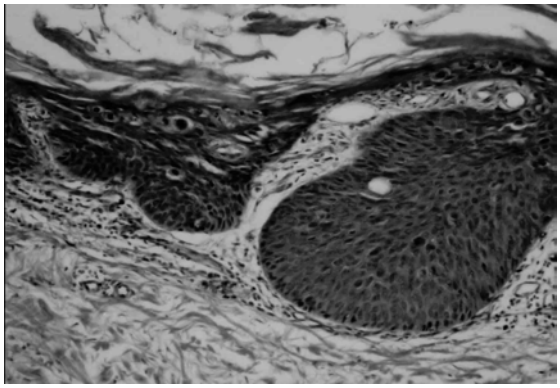


Figure 3. High magnification of figure 2. There are cells within epidermis showing atypical hyperchromatic nuclei and dyskeratosis (HEx200).



In the literature, there are some studies analyzing the age, sex and site distribution of Bowen's disease. In one of the studies, 68% of patients were males. Higher prevalence was reported in elderly in people, over the age of sixty.[10] Reymann et al [12] reported that 82% of 581 patients with Bowen's disease were over the age of 60. Our patient was male and over 60 years of age as well.

Kettler et al [13] demonstrated the presence of HPV in a lesion of nongenital Bowen's disease. The anatomic distribution of Bowen's disease, similar to that of non-melanoma skin cancers, occurs on sun-exposed skin areas (head, neck, hands); half of all lesions occur on the head (44% to 54%).[7] Kossard et al [14] found marked female predominance of Bowen's disease located on the cheeks and suggested that superficially placed vellus hair follicles on the cheeks of women might be more susceptible to chronic exposure to sun.

Bowen's disease has also been reported to arise from a scar tissue following trauma. The pathogenesis of malignancy in chronic scars and in traumatized skin is unknown. As scars are poorly vascularized, they are susceptible to ulceration and infection and tissue toxin may act as carcinogens. In cases of repeated damage, repeated proliferative repair can cause carcinoma.[15] In our patient, there was no history of trauma.

Typical Bowen's disease presents a gradually enlarging well demarcated erythematous plaque with an irregular border and surface crusting or scaling. The other peculiar feature is the pigmented border. Bowen's disease has been reported to arise from a pigmented seborrhoeic keratosis.[16] In the present case there was a scattered pigmented border. In addition there is a pigmented type of Bowen's disease, which should be considered in the differential diagnosis of malignant melanoma.[17]

There are some immmunohistochemical studies about Bowen's disease in the literature. In a recent study, the expressions of CD40 and FasL in normal skin, squamous cell carcinoma (SCC) and Bowen's disease were investigated immunohistochemically. Tae Jung Jang,[18] suggested that FasL is more strongly expressed in Bowen's disease when compared to SCC, but expression of CD40 was higher in SCC than Bowen's disease.

The paraneoplastic nature of Bowen's disease was first considered when Graham and Helwing in 1959 reported that 80% of the patients had internal malignancy. Several studies initially confirmed this observation.[1,16] But more recently, carefully controlled studies have shown that the disease has no clear paraneoplastic association.[11,19]

The diagnosis of Bowen's disease should be considered and a skin biopsy should be performed when a patient admits with a persistent cutaneous lesion that is of uncertain diagnosis or if an atypical dermatitis does not respond to steroid therapy. Carbon dioxide laser has been used for the treatment of Bowen's disease in one of the most recent studies.[20] In our case, the lesion was surgically excised, and free skin grafting was performed.

Finally, Bowen's disease should be considered when a skin lesion does not respond to treatment or lesion mimics papulosquamous disorders.

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