

Bowen's Disease of Vulva: A Rare Case of Vulvar Premalignant Disorder

Abstract

Bowen's disease was initially described by JT Bowen in 1912 and is believed to be a squamous cell carcinoma *in situ*. It can develop on any part of the skin surfaces, particularly sun-exposed areas, but vulvar Bowen disease is quite rare. It is one of the vulvar premalignant lesions which can progress to squamous cell carcinoma if not diagnosed and treated early as most cases of vulvar premalignant lesions are treated by dermatologists with topical steroid therapy as was in our case. The incidence is very rare. This was the first case detected in our institution in the last 20 years. She underwent wide local excision of the lesion and currently disease-free at 12 months of follow-up.

Keywords: Bowen disease, vulvar premalignant disorder, carcinoma *in situ*

Introduction

Bowen's disease is a variety of squamous cell carcinoma *in situ*^[1] that has the potential to progress to squamous cell carcinoma. It can develop on any part of the skin surfaces or mucous membranes, the majority are found on sun-exposed surfaces such as the head, neck, and hands, but the lesions over vulva are rare.^[2] The exact incidence vulvar Bowen disease is not known. The exact cause is not known, but a strong association with human papillomavirus 16 had been reported like other forms of vulvar premalignant diseases.^[3] Initially, there may be no associated symptoms, but eventually, itching or burning sensations may develop. If untreated, 10%–12% may progress to invasive carcinoma, particularly squamous cell carcinoma.^[4] The diagnosis mainly relies on histopathological examination, and the pathological characteristics are Bowen cells in the entire epidermis. The primary modality of treatment is surgical, either by wide local excision and, in some cases, may require vulvectomy.^[5] The prognosis is generally good. Herein, we report the case of a patient with Bowen's disease that developed in the vulva who was managed by wide local excision.

Case Report

A 56-year-old postmenopausal lady presented with 1 year history of itching and

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pigmented lesion over vulva. The lesion and symptoms were persisting, occasionally bled despite treatment by different dermatologists with topical steroids. The patient had no family history of skin cancer and was otherwise in good health. A physical examination of the lesions revealed a yellowish plaque-like lesion with the erosive center of size 2 cm × 3 cm at fourchette. The cervix and vagina were found to be normal. An incisional biopsy was taken from the lesion. Histopathology shows features of hyperkeratosis, presence of proliferating, highly atypical squamous cells accompanied by occasional mitotic figures, round-to-oval Bowen cells, and dense lymphocytic infiltration described as Bowen disease of vulva [Figure 1]. Then wide local excision of the lesion was done with 1 cm margin up to a depth of 3 cm into the subcutaneous fat. Final histopathology confirmed the previous biopsy report of Bowen disease of vulva with typical Bowen cells [Figure 2]. One year postoperatively, the patient shows no signs of recurrence and is undergoing follow-up on an outpatient basis.

Discussion

Bowen's disease is a type of squamous cell carcinoma *in situ*, first reported by J. T. Bowen in 1912.^[1] Typical clinical findings include a gradual enlargement of a well-demarcated erythematous epidermal lesion, hyperkeratosis, pruritus, and the presence of inflammation or irregular

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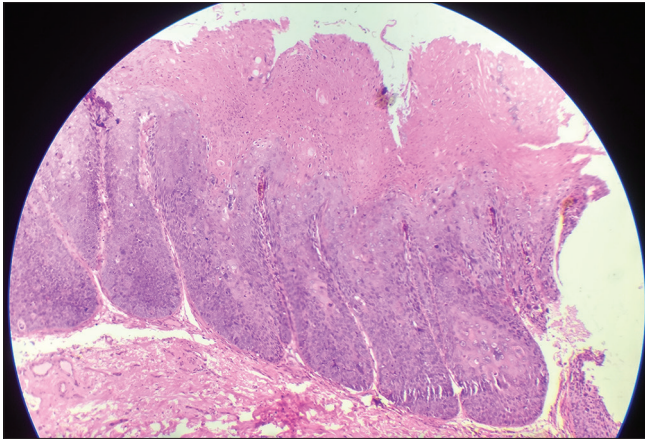


Figure 1: Low power microscopic view showing hyperkeratosis, parakeratosis with atypical squamous cells

brown papules.^[6] Patients generally visit dermatologists and are prescribed topical steroid ointments, which does not improve the condition. Punch biopsy or incisional biopsy is required for a definitive diagnosis of Bowen disease though rare. A definitive diagnosis of Bowen's disease is made on histopathology. Pathological features of Bowen's disease include hyperkeratosis, parakeratosis, dyskeratosis, abnormal mitoses, and the presence of proliferating atypical cells that do not evade the dermis with a typical round-to-oval giant Bowen cells.^[7] In our patient, proliferating atypical cells with large nuclei were observed in the epidermis with occasional mitotic figures. Furthermore, inflammatory cell infiltration was noted that extended from the epidermis to the superficial dermis. In the largest case series report of 18 cases over 20 years from China, the diagnostic characteristic was giant round or ovoid cells with the mono nucleolus, which are known as Bowen cells in the whole layer of the epidermis.^[5] Treatment can be either by the surgical or medical methods. Wide local excision, electrocoagulation, and CO₂ laser ablation fall under the category of the surgical modalities. Medical therapies involve the use of 5-fluorouracil or 5% imiquimod, systemic cidofivir, and photodynamic therapy.^[8] Though surgery is considered to be standard treatment, due to the multifocality nature of disease and predilection of young age, photodynamic therapy is being evaluated as a good alternative for cosmetic purposes, particularly if the disease is multifocal.^[9] In our case, as the lesion was small and unifocal she underwent wide local excision with a margin of 1 cm, which confirmed the diagnosis of Bowen's disease. After 1 year of follow-up, there was no evidence of any recurrence.

Conclusion

The clinical manifestations of vulvar Bowen's disease are mainly pigmented patches over vulva associated with itching and its pathological characteristics are Bowen cells. The diagnosis is primarily based on histopathological examination, and the treatment is mainly surgical.

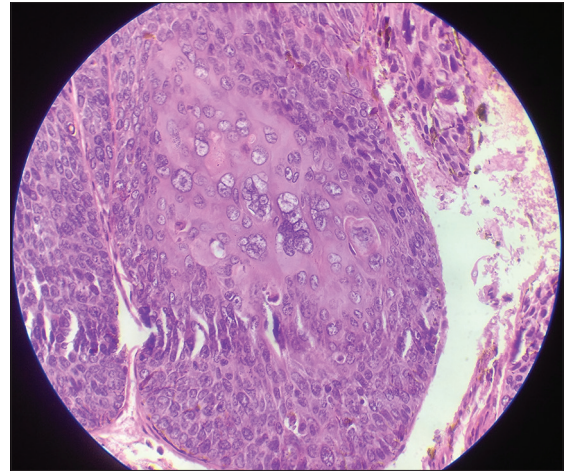


Figure 2: High power view atypical giant cells known as "bowen cells" and mitotic figures

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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Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Strayer DS, Santa Cruz DJ. Carcinoma *in situ* of the skin: A review of histopathology. *J Cutan Pathol* 1980;7:244-59.
2. Lee MM, Wick MM. "Bowen's disease," *CA Cancer J Clin* 1990;40:237-42.
3. Rubben A, Baron J, Grussendorfconen E. Prevalence of human papillomavirus type 16-related DNA in cutaneous Bowen's disease and squamous cell cancer. *Int J Oncol* 1996;9:609-11.
4. Cox NH, Eedy DJ, Morton CA, "Guidelines for management of Bowen's disease: 2006 update". *Br J Dermatol* 2007;156:11-21.
5. Guangwe Y, Lingying W, Rong Z, Xiaoguang L. Clinical analysis of 18 cases of Bowen disease of the vulva [J]. *Chin J Obstet Gynecol* 2013;48:925-8.
6. Jones RW. Natural history of cervical and vulvar intraepithelial neoplasia. *Am J Obstet Gynaecol* 2010;202:12-3.
7. Arlette JP, Trotter MJ. Squamous cell carcinoma *in situ* of the skin: History, presentation, biology and treatment. *Australas J Dermatol* 2004;45:1-9.
8. Duncan KO, Geisse JK, Leffell DJ. Epithelial precancerous lesions. In: Wolff K, Austen KF, Goldsmith LA, Katz SI, Gilchrist BA, Paller AS, *et al.*, eds. *Fitzpatrick's Dermatology in General Medicine*. 7th ed. New York: McGraw-Hill; 2007. p. 1021-3.
9. Kang HK, Yun JH, Son YM, Roh JY, Lee JR. Photodynamic therapy for Bowen's disease of the vulva area. *Ann Dermatol* 2014;26:241-5.