Multicentric pigmented Bowen’s disease of the genitalia associated with carcinoma in situ of the cervix

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SUMMARY A case of multicentric pigmented Bowen’s disease in a 45 year old woman with a previous history of carcinoma of the cervix is described. The two conditions may have a common pathogenesis, and a preceding viral infection with herpes simplex or human papillomavirus could be of aetiological relevance. Patients with multicentric pigmented Bowen’s disease may be at risk of developing other tumours of the genital tract. Treatment with carbon dioxide laser proved effective.

Introduction

Multicentric pigmented Bowen’s disease is a relatively benign form of carcinoma in situ of the genitalia, which has emerged as a distinct clinical entity since its recognition by Lloyd in 1970. We report on a patient in whom multicentric pigmented Bowen’s disease was preceded by carcinoma in situ of the cervix, and describe successful treatment of this condition by carbon dioxide laser.

Case report

A 45 year old woman presented with a one year history of increasing black pigmentation of the anogenital region associated with pruritus (fig 1). Examination showed intense pigmentation extending from the mons pubis to the natal cleft, which was macular on the clitoris, labia, and vaginal introitus but on the posterior commissure, perianal area, and natal cleft there were multiple pigmented papules coalescing to form plaques (fig 2). Multiple biopsy specimens taken from the perineum and perianal skin all showed cellular and nuclear atypia of the epidermis consistent with multicentric pigmented Bowen’s disease (fig 3).

Two years previously routine cervical cytology had disclosed severe dysplasia, and a cone biopsy of the cervix confirmed the presence of carcinoma in situ. A radical hysterectomy was performed. At that time no abnormality was noted on the anogenital skin. The patient had no history of herpes genitalis, condylomata acuminata, or any sexually transmitted disease.
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Discussion

Multicentric pigmented Bowen's disease has also been described as Bowenoid papulosis and referred to in men as pigmented penile papules and in women as reversible vulvar atypia. It characteristically presents in young adults, but has also been described in patients over 60. The initial lesions are multicentric papules, which are often irregular in outline and may be flat topped and shiny or verrucous. They occur most commonly on the penile shaft or the labia majora and may coalesce to form velvety plaques over a wide area of the anogenital skin. Lesions range in colour from reddish-brown to black, and may be pruritic. Both light and electron microscopy show features similar to classic Bowen's disease but with milder degrees of cellular atypia and occasionally perinuclear vacuole formation in the epidermis, as seen in condyloma acuminatum.

Multicentric pigmented Bowen's disease usually behaves in a benign fashion, and in many instances spontaneous regression has been described in both sexes. However, reported a case that progressed to squamous cell carcinoma, and De Villez and Stevens reported progression to classic Bowen's disease. As the malignant potential of multicentric pigmented Bowen's disease is therefore uncertain, some form of conservative ablative treatment is advised. Vulvectomy or amputation of the penis are unnecessary. Cryotherapy has been used successfully, and other agents such as topical 5-fluorouracil or podophyllin have been used. The carbon dioxide laser was effective in our patient, clearing the lesions with little discomfort and with minimal residual scarring and atrophy.

The pathogenesis of multicentric pigmented Bowen's disease is unknown but both herpes genitalis and condyloma acuminatum show a strong temporal relation to the disease, and virus particles with morphological similarities to herpes simplex and also to human papillomavirus have been shown in lesions of multicentric pigmented Bowen's disease.

The occurrence of some patients with antecedent carcinoma in situ of the cervix is of relevance. In an epidemiological study of 50 patients with carcinoma in situ of the vulva, Friedrick et al found an association with carcinoma in situ and three invasive carcinomas. From the description of 17 (34%) of their patients with hyperpigmented lesions and five (10%) with multifocal papules who experienced spontaneous regression of their disease, it would appear that many of their patients had multicentric pigmented Bowen's disease. In addition, that study showed a 30% incidence of previous or concomitant DNA viral infections (condyloma or herpes, or both) in association with vulval carcinoma in situ, which

![FIG 2 Darkly pigmented multicentric papules coalescing to form plaques on the perianal region and the natal cleft.](image-url)
suggests that common pathogenic factors, probably viral, may be associated with carcinoma of the vulva and cervix. Now that multicentric pigmented Bowen's disease is recognised as clinically distinct from carcinoma in situ of the vulva, future epidemiological studies of the disease per se are required to ascertain the true incidence of associated genital malignancies.

In conclusion, it is unlikely that the appearance of multicentric pigmented Bowen's disease with carcinoma of the cervix in this patient was fortuitous. We recommend that patients with multicentric pigmented Bowen's disease should be carefully screened for coexisting carcinoma of the genital tract. Treatment with carbon dioxide laser would appear to be an effective form of treatment for this condition.

References


FIG 3 Section of biopsy specimen from the perianal area showing parakeratosis, acanthosis of the epidermis, individual cell keratinisation, increased basal cell pigmentation, and pigment deposits in dermal melanophages. (Haematoxylin and eosin × 50.)
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