

Cutaneous Bowen's Disease: an Analysis of 182 Cases according To Age, Sex, and Anatomical Site from an Italian Center

Massimiliano Scalvenzi, Alessia Villani*, Caterina Mazzella, Gabriella Fabbrocini, Claudia Costa

Department of Dermatology, University of Naples Federico II, Naples, Italy

Abstract

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***Correspondence:** Alessia Villani, Department of Dermatology, University of Naples Federico II, Naples, Italy. E-mail: ali.vil@hotmail.it

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BACKGROUND: Bowen's disease (BD), also known as squamous cell carcinoma in situ, is a type of non-melanocytic intraepidermal malignancy characterised by a slowly enlarging erythematous to pink, scaly patch or plaque with irregular and well-demarcated borders. These lesions are usually persistent and progressive; it has been estimated that in general population around 3% to 5% of Bowen's disease transform into invasive squamous cell carcinoma.

CASE PRESENTATION: This report describes our experience with cutaneous BD and assesses the differences found about age, sex and anatomical site.

CONCLUSION: Bowen's disease was seen more frequently in male patients rather than in female patients in contrast to what confirmed in literature - this difference is probably because being head-neck an exposed region, patients are more easily induced to autoexam and to consult the dermatologist.

Dear Editor,

Bowen's disease (BD), also known as squamous cell carcinoma in situ, is a type of non-melanocytic intraepidermal malignancy characterised by a slowly enlarging erythematous to pink, scaly patch or plaque with irregular and well-demarcated borders [1]. These lesions are usually persistent and progressive; it has been estimated that in general population around 3% to 5% of Bowen's disease transform into invasive squamous cell carcinoma [2], [3]. This report describes our experience with cutaneous BD and assesses the differences found about age, sex and anatomical site. One hundred eighty-two patients with cutaneous Bowen diseases were diagnosed between January 2010 and December 2017. All patients provided informed consent for our protocol conforming to the ethical guidelines of the 1975 Declaration of Helsinki. All patients had histopathologic-confirmed BD or squamous cell carcinoma in situ. This study was conducted at the Skin Cancer Unit of University of

Federico II, Naples. Inclusion criteria were: (i) clinical (slowly enlarging, well-demarcated erythematous to pink patch or plaque with irregular borders and surface scale or crust) and dermoscopic (using pattern analysis) criteria for a diagnosis of Bowen's disease (e.g. multicomponent global pattern and a prominent vascular pattern of dotted and glomerular vessels together with a scaly surface); moreover, (ii) the presence of small brown globules or of grey to brown homogeneous pigmentation in the same dermoscopic structures were considered to be pigmented Bowen's disease. Superficial lesions such as Bowenoid papulosis were excluded. Lesions were recorded according to the age, sex of each patient, and by anatomical site (Table 1).

Table 1: Percentage of Bowen's disease found at each anatomical site according to the sex

	Males	Females
Head-neck	31%	17%
Upper limbs	15%	14%
Lower limbs	24%	39%
Trunk	21%	24%
Acral sites	9%	6%

A total of 182 Bowen's diseases were included. The mean age was 65 years (56-77). The χ^2 test of independence was used to compare sex-based differences. P-values < 0.05 were considered statistically significant. We found Bowen's disease to be more prevalent in male patients (94/182) rather than in female patients (88/182) (52% vs 48%).

Furthermore, head and neck region was the anatomical site most frequently observed in male patients (29/98, P = 0.3), whereas, lower limbs were the most represented location in female patients (34/88, P = 0.4). This result is in line with other studies in which head and neck are the anatomical sites most frequently involved followed by the lower limbs [4]. Our study has some limitations. Firstly, this is a retrospective observational study. Two individuals evaluated features to eliminate misclassification bias, with a third individual performing the decisive assessment in case of disagreement. Several studies report that Bowen's disease occurs more frequently in females and frequency varies between countries.

Moreover, our data suggest that there is a well-demarcated sex-difference statistically significant according to the anatomical site; in fact, head and neck are the most represented sites in male patients (31%), while women more commonly have Bowen's disease lesions on the lower limbs (39%). In conclusion, Bowen's disease was seen more frequently in male patients rather than in female patients in contrast to what confirmed in the literature [5]; this difference is probably because being head-

neck an exposed region, patients are more easily induced to autoexam and to consult the dermatologist. Further studies are required to evaluate these results and to better compare sex-based differences of Bowen's disease.

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