

Pigmented Squamous Cell Carcinoma: Is the Reported Prevalence Real?

Paola Corneli¹, Elvira Moscarella², Eugenia V. Di Brizzi², Andrea Ronchi³,
Iris Zalaudek¹, Roberto Alfano⁴, Giuseppe Argenziano²

1 Dermatology Unit, University of Trieste, Trieste, Italy

2 Dermatology Unit, University of Campania, Naples, Italy

3 Anatomic-pathology Unit, University of Campania, Naples, Italy

4 Department of Anesthesiology Surgery and Emergency, University of Campania, Naples, Italy

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Corresponding author: Giuseppe Argenziano, MD, Dermatology Unit, University of Campania, Nuovo Policlinico (edificio 9C), Via Pansini 5, 80131 Naples, Italy. Email: g.argenziano@gmail.com

Introduction

Pigmented squamous cell carcinoma (PSCC) is a rare variant of squamous cell carcinoma (SCC), generally described in oral mucosa, conjunctiva and cornea, but only rarely found on the skin. Histopathologically, it is characterized by a proliferation of atypical keratinocytes associated with nonneoplastic dendritic melanocytes and melanophages in the surrounding stroma [1]. Clinically and dermoscopically PSCC diagnosis is very difficult because of overlapping features with benign and malignant lesions, including basal cell carcinoma (BCC), melanoma, pigmented actinic keratosis, and seborrheic keratosis. Only 22 cases of PSCC have been reported in the literature (Table 1).

We searched our image database from 2011 to 2018 and found 899 histopathologically diagnosed SCCs, with only 3 of them being pigmented (prevalence of 0.33% of all SCCs).

We present 1 of these 3 cases, showing clinical and dermoscopic characteristics of pigmented BCC.

Case Presentation

A 77-year-old white man presented with a 12-mm lesion of the chest, which had been noticed 1 year before. Clinically, the lesion appeared as a pigmented nodule with central ulceration (Figure 1A). Dermoscopically, it showed blue areas at the periphery and white polymorphous vessels surrounding a central hyperkeratotic area (Figure 1B). Histopathological examination showed epidermis with hyperkeratosis and full-thickness cellular atypias. In some fields, solid nests were evident in the superficial dermis, constituted by atypical cells with abundant, slightly eosinophilic cytoplasm and intercellular bridges. The dermis was diffusely infiltrated by a dense lichenoid lymphocytic population. A final diagno-

sis of infiltrating (0.9-mm) SCC with G2 differentiation was rendered (Figure 1, C and D).

Conclusions

Dermoscopy alone does not allow differentiating PSCC from other pigmented skin lesions. The present case highlights how overlapping features with pigmented BCC are possible in PSCC. The majority of keratinizing tumors, and SCC in particular, are non-pigmented. Dermoscopic examination of these tumors generally reveals the presence of hairpin or atypical vessels, often surrounded by a whitish halo associated with the keratinizing process. Our case showed blue areas and linear polymorphous vessels surrounding a central hyperkeratotic area. Zalaudek et al described a similar case of PSCC with a bluish diffuse pigmentation with central ulceration [2]. Others reported cases of PSCC with overlapping dermoscopic features of melanocytic lesions with radial brown streaks and globules.

The real prevalence of PSCC is unclear, with the English literature reporting an incidence of about 0.01% to 7% of all SCCs, whereas the non-English literature describes an incidence of approximately 25% [1]. The rate we found in our population, 0.33% of all SCCs, is between these 2 values. These variability in incidence rates may be due to factors related to the skin type of the population included. However, further studies are needed to support this hypothesis.

References

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2. Zalaudek I, Citarella L, Soyer HP, Hofmann-Wellenhof R, Argenziano G. Dermoscopy features of pigmented squamous cell carcinoma: a case report. *Dermatol Surg*. 2004;30(4 Pt 1):539-540.

Table 1. All Described Cases of PSCC in the Literature With Associated Author

Author, Year	Site	No. of Cases Described
Becker, 1934	Not stated	3
Kossard, 1997	Ear	1
Jurado, 1998	Frontotemporal and nose	2
Matsubo, 1999	Scrotum	1
Kamiya, 1999	External auditory canal	1
Morgan, 2000	Right helix, left temple, left eyebrow, right cheek, right temple	5
Chapman, 2000	Middle forehead	1
Terada, 2003	Right cheek	1
Zalaudek, 2004	Chest	1
Satter, 2007	Left cheek	1
Chung, 2015	Back	1
de Giorgi, 2009	Upper lip	1
Verdú-Amorós, 2016	Head	1
Savoia, 2013	Nose	1
Namiki, 2015	Cheek	1
Total		22

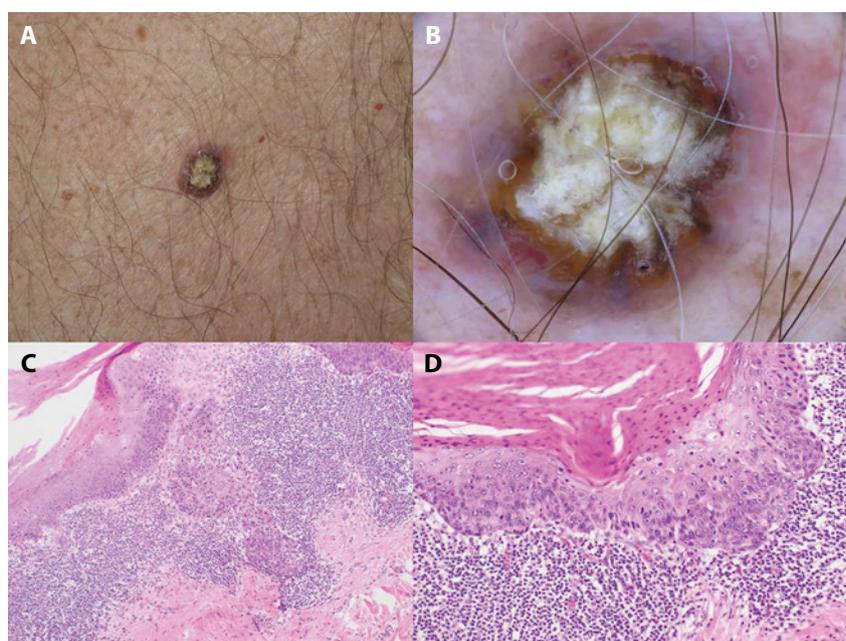


Figure 1. (A) Clinical image of a nodular lesion on the right chest of a 77-year-old man. (B) Dermoscopic examination shows blue areas and polymorphous vessels surrounding a central hyperkeratotic area. (C) Histopathological examination ($\times 20$) shows hyperkeratosis and full-thickness cellular atypias. In some fields, some solid nests were evident in the superficial dermis, constituted by atypical cells with abundant slightly eosinophilic cytoplasm and intercellular bridges. The dermis was diffusely infiltrated by a dense lichenoid lymphocytic population. (D) Higher magnification ($\times 40$) of panel C. [Copyright: ©2019 Corneli et al.]