

circumscribed erythema in the V-neck area not protected by clothes during the season when the dose of ultraviolet radiation is increased in Japan, which was considered to be a photo-Koebner phenomenon. Only several cases of photo-induced or photo-distributed SS have been reported, in which both ultraviolet A and ultraviolet B were candidates for induction of skin lesions.<sup>1-3</sup> Although phototesting was not performed in the present case, the patient had no previous history of photosensitive dermatitis or of taking drugs that can induce photosensitive eruptions. To our knowledge, the current report is the first case of photolocalized bullous SS. The direct action of ultraviolet is speculated to activate and recruit neutrophils via interleukin-8, tumor necrosis factor- $\alpha$ , E-selectin, interleukin-1 $\alpha$ , and G-CSF<sup>4,5</sup> as well as ultraviolet-induced local immunosuppression. Finally, the patient concurrently developed infiltrative erythematous nodules on the face and extremities. Biopsy showed septal panniculitis with lymphocytic infiltration without neutrophil infiltration in either dermis or subcutis; however, all of the concurrent lesions were considered to be part of the same spectrum.

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None declared.

### Authors' contributions

Mai Endo: Designed the study; performed the research and contributed to analysis and interpretation of data; wrote the initial draft of the manuscript; read and approved the final version of the manuscript.

Miyuki Yamamoto: Performed the research and contributed to analysis and interpretation of data; read and approved the final version of the manuscript.

Mikio Ohtsuka: Performed the research and contributed to analysis and interpretation of data; read and approved the final version of the manuscript.





Toshiyuki Yamamoto: Designed the study; assisted in the preparation of the manuscript; read and approved the final version of the manuscript.

### Conflicts of interest

None declared.

### References

1. Horio T. Photoaggravation of acute febrile neutrophilic dermatosis Sweet's syndrome. *J Dermatol.* 1985;12:191-4.
2. Belhadjali H, Marguery MC, Lamant L, Giordano-Labadie F, Bazex J. Photosensitivity in Sweet's syndrome: two cases that were photoinduced and photoaggravated. *Br J Dermatol.* 2003;149:675-7.
3. Meyer V, Schneider SW, Bonsmann G, Beisert S. Experimentally confirmed induction of Sweet's syndrome by phototesting. *Acta Derm Venereol.* 2011;91:720-1.
4. Strickland I, Rhodes LE, Flanagan BF, Friedmann PS. TNF-alpha and IL-8 are upregulated in the epidermis of normal human skin after UVB exposure: correlation with neutrophil accumulation and E-selectin expression. *J Invest Dermatol.* 1997;108:763-8.
5. Yoshizumi M, Nakamura T, Kato M, Ishioka T, Kozawa K, Wakamatsu K, et al. Release of cytokines/chemokines and cell death in UVB-irradiated human keratinocytes, HaCaT. *Cell Biol Int.* 2008;32:1405-11.

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## Extraocular sebaceous carcinoma: tumor presentation of rapid evolution

*Dear Editor,*

Sebaceous carcinoma (SC) is a rare malignant neoplasm derived from the adnexal epithelium of the sebaceous glands, with a higher incidence in the ocular region, particularly in the eyelid region, and has a potentially aggressive behavior.<sup>1-3</sup> Older age, previous radiotherapy, and association with Muir-Torre syndrome are predisposing conditions.<sup>1-3</sup>

This is the case report of a 75-year-old white male patient with a history of squamous cell carcinoma (SCC), referred for treatment of facial lesion noted three months before, with rapid growth and bleeding episodes associated with trauma. Upon examination, a 5-cm, rounded, erythematous-violaceous, pre-auricular tumor was observed, with friable and necrotic areas associated with a 1-cm satellite lesion with similar characteristics and a post-SCC excision skin graft scar (Fig. 1). No regional lymph node enlargement was detected. The hypotheses were SCC, SCC metastasis, and angiosarcoma. Histopathological examination (Figs. 2 and 3) showed a dermal neoplasm with polygonal clear cells, evident nuclear pleomorphism, cell debris, and frequent mitoses. Immunohistochemistry disclosed positivity for epithelial markers AE1/AE3 and epithelial membrane antigen (EMA) which, associated with histopathological findings, allowed the diagnosis of sebaceous carcinoma (SC), and

☆ Study conducted at the Department of Infectology, Dermatology, Diagnostic Imaging and Radiotherapy, Faculdade de Medicina, Universidade Estadual Paulista, Campus de Botucatu, SP, Brazil.

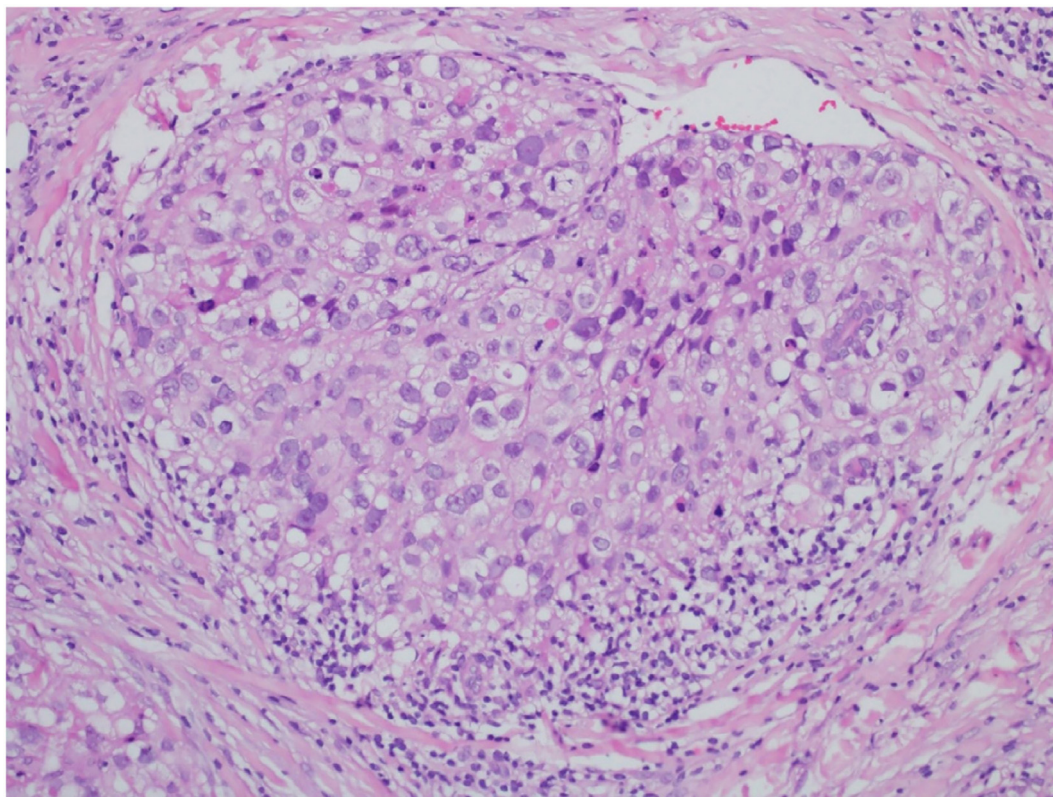


**Figure 1** Extraocular sebaceous carcinoma. Tumor measuring 5 cm, rounded, with an erythematous-violaceous color, located on the right preauricular region, with friable and necrotic areas. Satellite lesion measuring 1 cm with similar features besides a SCC excision scar.

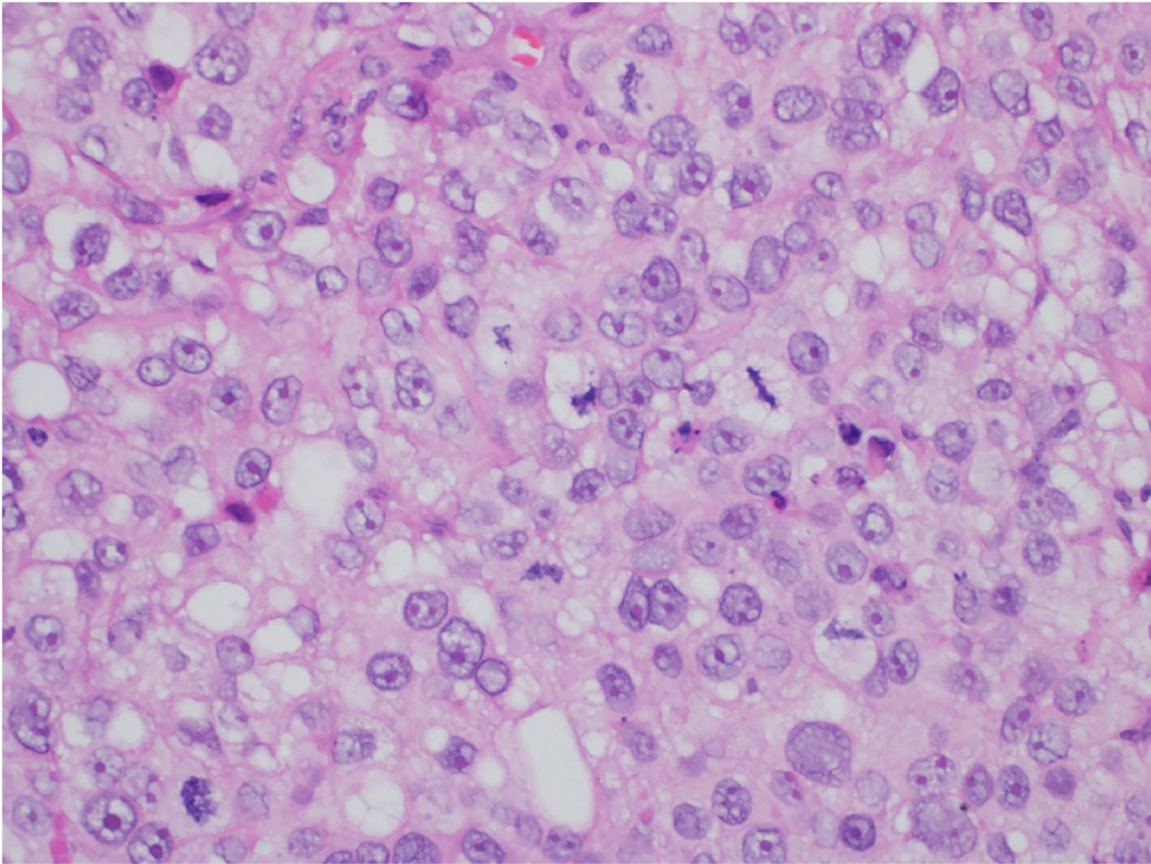
thus, the patient was referred to the Head and Neck Surgery Division of the institution.

In a review of 1349 SC cases, a predominance of males (54%) was observed, as well as mean age of 73 years, 86% whites, 38.7% on the palpebra, with a survival rate of 91.9%, and 79.2% in 5 and 10 years respectively.<sup>1</sup> The most frequent metastases were found in the lymph nodes.<sup>1,3</sup> Most cases occur *de novo*, although it may originate from benign sebaceous lesions and, when located in the upper or lower eyelid, it is associated with the Meibomian and Zeis glands.<sup>1-3</sup> Clinical presentation is variable; it is usually painless and slow-growing, but it can be rapid-growing and aggressive.<sup>2</sup> It is the third or fourth most frequent malignant neoplasm of the eyelids, depending on the reference.<sup>1-3</sup> The most frequent extraocular location is the cephalic segment, especially the face. The diagnosis of SC should be a warning sign, as it is a possible marker of Muir-Torre syndrome, a genodermatosis characterized by the presence of skin tumors of sebaceous origin associated with systemic malignancies, particularly of the gastrointestinal tract.<sup>1</sup> A subcutaneous nodule is usually observed in SC, which is normochromic; however, it may disclose different morphologies, colors and behavior, depending on its place of origin.<sup>1-3</sup>

The differential diagnosis of extraocular SC includes basal cell carcinoma (BCC), SCC, amelanotic melanoma, Merkel cell carcinoma, and cutaneous lymphoma.<sup>1,3</sup> The immunohistochemical use of markers for BerEP4, EMA (negative in BCC), AE1 and AE3 (negative in melanoma, lymphomas), adipophilin (negative in SCC, Merkel), p53 and Ki-67, will aid in the diagnosis and prognosis.<sup>1-4</sup> The treatment com-



**Figure 2** Extraocular sebaceous carcinoma. Neoplasm characterized by polygonal clear cells, nuclear pleomorphism, cell debris, and frequent mitoses (Hematoxylin & eosin, ×40).



**Figure 3** Extraocular sebaceous carcinoma. Detail of neoplastic cells showing nuclear pleomorphism, prominent nucleoli, and multilobular cytoplasm (Hematoxylin & eosin,  $\times 400$ ).

prises surgical resection with a 1-cm margin or the use of the micrographic surgical technique.<sup>2</sup> A therapeutic option in cases of metastatic SC to the lungs and CNS is immunotherapy with pembrolizumab, which belongs to the class of inhibitors of anti-PD1 immunological checkpoints (programmed death-1), and is also used in metastatic melanoma and Merkel cell carcinoma.<sup>5</sup>

This case report exemplifies a case of an atypical presentation of extraocular SC, especially due to the rapid growth and aggressiveness of the tumor, which when diagnosed had a specific satellite lesion and tumorous clinical aspect.

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### Authors' contributions

Luana Moraes Campos: Approval of the final version of the manuscript; design and planning of the study; critical review of the literature.

Joana Alexandria Ferreira Dias: Approval of the final version of the manuscript; critical review of the manuscript.

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Silvio Alencar Marques: Approval of the final version of the manuscript; drafting and editing of the manuscript; critical review of the literature; critical review of the manuscript.

### Conflicts of interest

None declared.

### References

1. Dasgupta T, Wilson LD, Yu JB. A retrospective review of 1349 cases of sebaceous carcinoma. *Cancer*. 2009;115:158–65.
2. Owen JL, Kibbi N, Worley B, Kelm RC, Wang JV, Barker CA, et al. Sebaceous carcinoma: evidence-based clinical practice guidelines. *Lancet Oncol*. 2019;20:699–714.
3. Tryggvason G, Bayon R, Pagedar NA. Epidemiology of sebaceous carcinoma of the head and neck: implications of the lymph node management. *Head Neck*. 2012;34:1765–8.
4. Mulay K, White VA, Shah SJ, Honavar SG. Sebaceous carcinoma: clinicopathologic features and diagnostic role of immunohistochemistry (including androgen receptor). *Can J Ophthalmol*. 2014;49:326–32.
5. Domingo-Musibay E, Murugan P, Giubellino A, Sharma S, Steiberger D, Yuan J, et al. Near complete response to Pembrolizumab in microsatellite-stable metastatic sebaceous carcinoma. *J Immunother Cancer*. 2018;6:58.

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## Is there a link between guttate psoriasis and SARS-CoV-2? A series of three cases<sup>☆</sup>



Dear Editor,

Guttate psoriasis (GP) is an acute form of psoriasis that is associated with bacterial infections, mainly streptococcal, which cause superantigen-induced immune activation.<sup>1,2</sup> Viral upper respiratory infections may also be implicated, typically occurring two to three weeks before the onset of guttate lesions.<sup>1,3</sup>

We report three cases of GP following Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) infection and BNT162b2 mRNA vaccine.

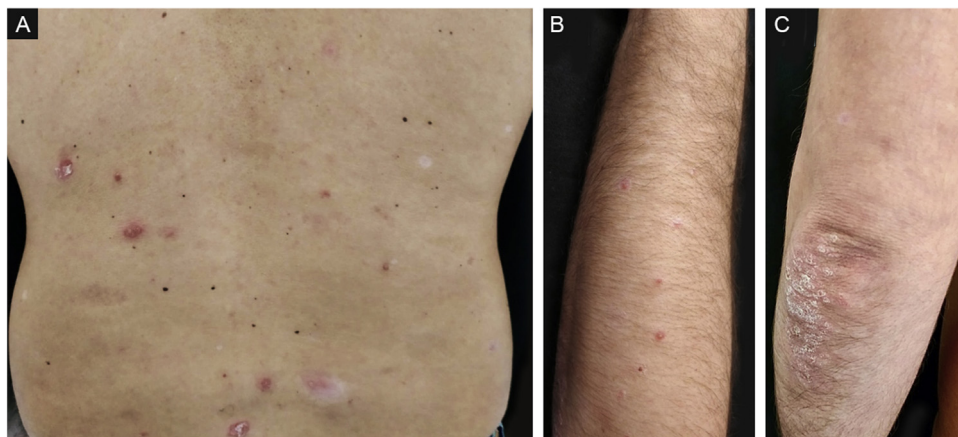
A 42-year-old caucasian male with a history of chronic plaque psoriasis developed multiple erythematous scaly papules and plaques on the face, trunk, upper and lower limbs, and scaly erythematous plaques over the elbows and knees (Fig. 1), one week after he was diagnosed with Coronavirus Disease 2019 (COVID-19). We established a clinical and histopathological (Fig. 2) diagnosis of GP and a flare of plaque psoriasis.

A 32-year-old caucasian female with a history of chronic plaque psoriasis developed multiple erythematous scaly papules and plaques on the trunk, upper and lower limbs, as well as scaly erythematous plaques over the elbows and knees (Fig. 3), two weeks after she was diagnosed with COVID-19. We established a clinical diagnosis of GP and a flare of plaque psoriasis.

A 45-year-old caucasian male with a history of chronic plaque psoriasis presented with multiple erythematous scaly papules and small plaques on the trunk and upper limbs, one week following the first dose of COVID-19 BNT162b2 mRNA vaccine, with worsening after the second dose. A clinical diagnosis of GP was made.

The correlation between psoriasis and infection is well established, and viruses are recognized triggers. In one study of viral respiratory infections causing psoriasis flares, coronavirus was one of the most frequently detected pathogens.<sup>3</sup>

SARS-CoV-2 spike (S) protein exhibits a high-affinity motif for T-Cell Receptors (TCR) and may form a ternary complex with Major Histocompatibility Complex type 2



**Figure 1** Guttate psoriasis and chronic plaque psoriasis flare (case 1): (A) Guttate psoriasis drop-like erythematous plaques and scaly erythematous plaques on the trunk; (B) Guttate psoriasis drop-like erythematous plaques on the upper limbs; (C) Scaly erythematous plaques on the elbows.

<sup>☆</sup> Study conducted at the Dermatology and Venereology Department, Hospital de Santa Maria, Centro Hospitalar Universitário Lisboa Norte, Lisbon, Portugal.