

Painful nodule on a young woman's cheek

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Abstract

We present a 30-year-old woman with a solitary circumscribed neuroma (also known as palisaded encapsulated neuroma) diagnosed after surgical excision. We describe the histopathologic correlation and the dermoscopic features we found in this tumor, which have not been previously reported in the literature to our knowledge.

Keywords: solitary circumscribed neuroma, palisaded encapsulated neuroma, dermoscopy, polymorphous vessels

Introduction

Solitary circumscribed neuroma (SCN), also called palisaded encapsulated neuroma (PEN), is a benign tumor, which often affects adult patients on the head and neck area. It usually appears as an asymptomatic nodule and may be mistaken for other more common tumors. A few, non-specific dermoscopic features have been reported. Diagnosis is histological and complete surgical excision is the preferred treatment.

Case Synopsis

A 30-year-old woman presented with a 10-month history of a nodule on her right cheek, which she had treated with topical antibiotic without improvement. She noted discrete tenderness with pressure. Her personal and family history was unremarkable. Physical examination revealed a 5mm erythematous area with deeper color toward the center (**Figure 1**).

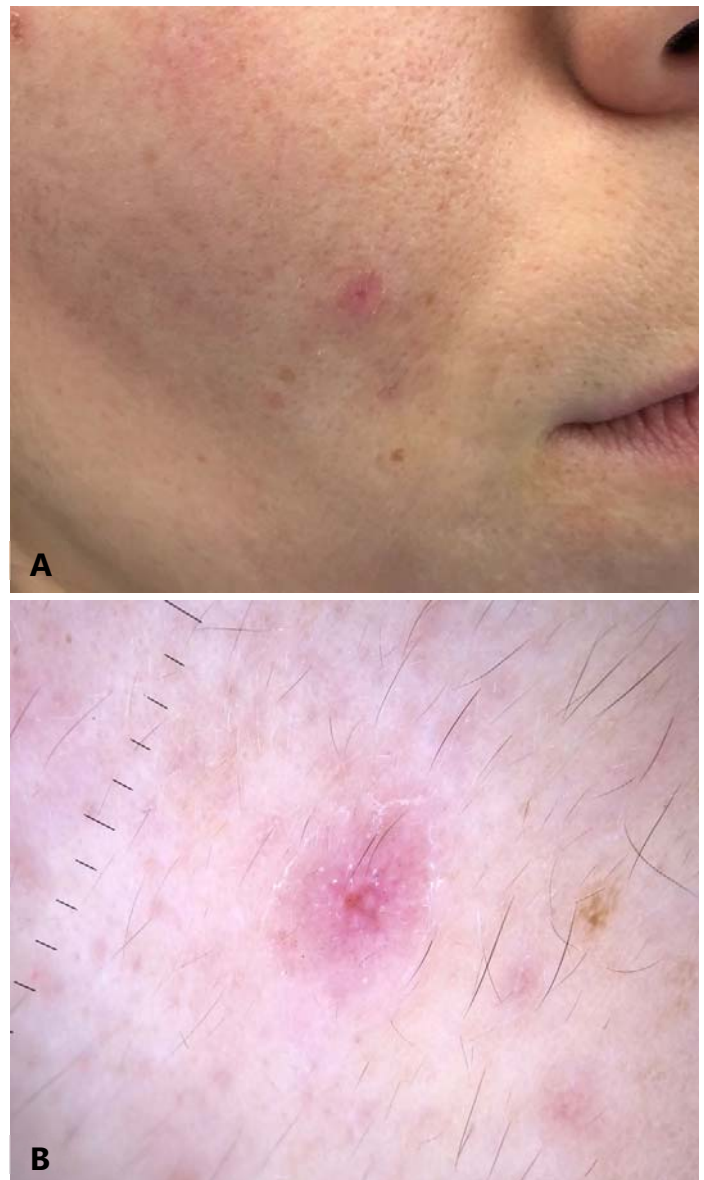


Figure 1. A) Erythematous nodule on the right cheek. **B)** Dermoscopy examination showing polymorphous vessels surrounding whitish nodules on a reddish background and a focal erosion.

A poorly defined, 2-3mm nodule could be felt underneath. Dermoscopy examination revealed multiple polymorphous vessels surrounding whitish nodules over a red background. Focal erosion and peripheral desquamation were also observed (**Figure 1**). A 5mm-punch excision was performed.

Histopathological examination showed a well-circumscribed, round, un-encapsulated dermal proliferation of spindle cells with wavy, elongated nuclei arranged in fascicles and pale eosinophilic cytoplasm (**Figure 2**). No mitosis or nuclear atypia were present. Verocay bodies or Antoni B-like areas were absent.

Case Discussion

Solitary circumscribed neuroma (SCN), also known as palisaded encapsulated neuroma (PEN), is likely an underreported entity which often affects adult patients. It was first described by Reed et al. in 1972 and then renamed by Fletcher in 1989 [1, 2]. It usually appears as an asymptomatic nodule on the head and neck area, which is often mistaken for other, more common, lesions such as intradermal nevus, basal cell carcinoma, pilomatrixoma, fibroma, molluscum contagiosum, epidermal cyst, or other adnexal tumor. Involvement of other anatomical locations such as trunk, hands, feet, and genital and oral mucosa have also been reported. A patch of nonscarring alopecia with complete hair regrowth after the excision of the tumor has been described [3]. These tumors are not associated with any syndrome or systemic disease. Although SCNs do not tend to grow or recur but since the clinical diagnosis may be challenging, complete surgical excision and histological examination is the preferred treatment.

Histologic examination reveals a well-circumscribed, partially encapsulated intradermal nodule comprised of spindle cells grouped in fascicles, without nuclear pleomorphism or mitosis. Solitary circumscribed neuromas stain positive for S100 protein, collagen type IV, and vimentin and negative for glial fibrillary acidic protein. Pathophysiology remains unclear, but a hamartomatous growth of Schwann cells over several axons triggered by an unknown factor has been proposed [4].

There are only a few cases in the literature which describe the dermoscopic features of the SCN. These include arborizing vessels on a pink background, with or without a whitish central patch, and an ivory-white patch without other dermoscopic findings [4-6].

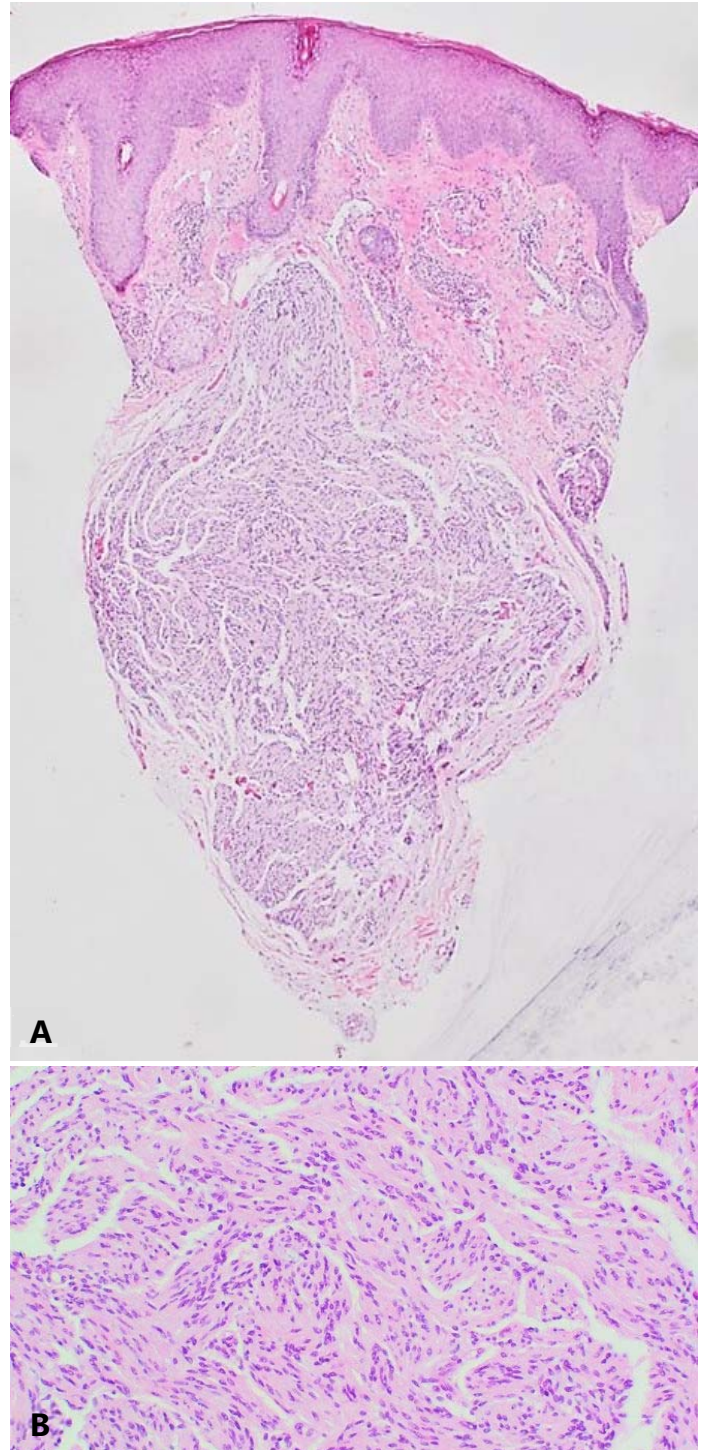


Figure 2. Non-encapsulated dermal proliferation of spindle cells with wavy, elongated nuclei arranged in fascicles and pale eosinophilic cytoplasm. No atypical cells or mitosis figures are present. H&E, **A**) 1×. **B**) 20×.

Conclusion

We present a case of a solitary circumscribed neuroma and describe two dermoscopic features not previously reported in this tumor, the presence of focal ulceration and the peripheral polymorphous vascular pattern. Dermatologists should add this diagnosis when evaluating a nodule on the head and neck region. More cases that describe the

dermoscopic findings in SCN are required in order to establish criteria that define these tumors and may help prevent excision if no symptoms or aesthetic concerns are present.

Potential conflicts of interest

The authors declare no conflicts of interests.

References

1. Reed RJ, Fine RM, Meltzer HD. Palisaded, encapsulated neuromas of the skin. *Arch Dermatol*. 1972;106:865-70. [PMID: 4639250].
2. Fletcher CD. Solitary circumscribed neuroma of the skin (so-called palisaded, encapsulated neuroma). A clinicopathologic and immunohistochemical study. *Am J Surg Pathol*. 1989;13:574-80. [PMID: 2660609].
3. Hernández-Cano N, Pizarro A, Lázaro TE, Mayor M, Burón I, Contreras F, Casado M. Nonscarring alopecia associated with solitary circumscribed neuroma. *Dermatology*. 1997;195:265-7. [PMID: 9407176].
4. Fernández-Crehuet P, Fernández-Crehuet JL, Ruiz-Villaverde R, Sanz-Trelles A. Solitary circumscribed neuroma: A clinical and dermoscopic mimicker of basal cell carcinoma. *Int J Dermatol*. 2015;54:e275-7. [PMID: 25782616].
5. Moyano EG, Blanca MA, Pilar LM, Martos AO, Fernandez Ballesteros MD, Trelles AS. Homogeneous white patch in dermoscopy of solitary circumscribed neuroma. *J Am Acad Dermatol*. 2017;76:S84-5. [PMID: 28087044].
6. Fernández-Crehuet P, Ruiz-Villaverde R. Solitary Circumscribed Neuroma: Dermoscopic clues to facilitate diagnosis. *Sultan Qaboos Univ Med J*. 2018;18:e116-e117. [PMID: 29666696].