

Neutrophilic Dermatositis of Hands as Oncological Finding: Importance of Follow-Up

Jérôme R. Lechien^{a, b, c} Daphné Delplace^d Mohamad Khalife^a Sven Saussez^{a, b}

^aDepartment of Otolaryngology and Head and Neck Surgery, RHMS Baudour, EpiCURA Hospital, Baudour, Belgium; ^bDepartment of Otolaryngology and Head and Neck Surgery, CHU Saint-Pierre, Université Libre de Bruxelles, Brussels, Belgium; ^cDepartment of Human Anatomy and Experimental Oncology, Faculty of Medicine, Research Institute for Health Sciences and Technology, University of Mons (UMONS), Mons, Belgium; ^dDepartment of Dermatology, RHMS Baudour, EpiCURA Hospital, Baudour, Belgium

Keywords

Neutrophilic · Dermatositis · Head · Neck · Cancer · Paraneoplasia

Abstract

Neutrophilic febrile dermatosis (NFD) is a rare paraneoplastic syndrome that may be found in patients with head and neck cancer. NFD may appear before the neoplasia and may only concern the dorsal faces of the hands. This article reports the NFD findings of a patient with pharyngeal cancer, which was developed 2 years after the occurrence of NFD. The development of NFD in patient with alcohol and tobacco consumption should lead otolaryngologists and dermatologists to suspect head and neck malignancy. In cases of normal otolaryngological examination, patients have to be followed.

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Introduction

Head and neck cancers are usually diagnosed in patients with ongoing otolaryngological symptoms such as dysphagia, dysphonia, dyspnea, throat or ear pain, and neck lymph nodes. In rare cases, the cancer is associated with paraneoplastic syndrome that may be more difficult to recognize. In this article, we present a very rare case of paraneoplastic syndrome that preceded the detection of hypopharyngeal squamous cell carcinoma.

Case Report

A 58-year-old man was addressed to the department of dermatology with a 4-week history of painful ulcerative lesions of hands. The patient had petechial lesions that progressively evolved to pustules and ulcerations (Fig. 1). Low-grade fever was reported in the last month. The patient smoked 1 pack of cigarettes per day (30 pack-year history) and he drank several beers per day for many

years. Cardiovascular, respiratory, abdominal, and neurological examinations were normal. A biopsy was performed. The histopathological examination revealed superficial neutrophilic dermatosis with marked infiltrate of neutrophils, and leukocytoclastic vasculitis without necrosis or infection. A neutrophilic febrile dermatosis (NFD) diagnosis was retained regarding macroscopic and microscopic lesion characteristics. Patient benefited from a topical corticosteroid treatment and the lesions disappeared over the next few weeks (Fig. 1). The patient benefited from an otolaryngological check-up, chest, and head and neck CT-scan, which were all unremarkable. Regarding the risk of cancer, a follow-up was proposed to the patient. Two years later, the patient complained of dysphagia and weight loss and the ear, nose, and throat work-up revealed a cT3N1 hypopharyngeal carcinoma that was successfully treated by surgery and postoperative radiotherapy.

Discussion

NFD is associated with cancer in 10–20% of cases [1]. NFD is very rare in otolaryngology-head & neck surgery with a few reported cases in oral [1], pharyngeal [2], or laryngeal [3] squamous cell carcinoma. In the majority of cases [1–4], NFD and cancer developed in the same time, and NFD did not only involve the patient hands. The present case is unusual for 2 reasons. First, NFD developed 2 years prior the pharyngeal cancer, which is a rare presentation [2]. Second, NFD only occurred on the dorsal face of the hands, highlighting that NFD may be limited to the dorsal face of the hands.

NFD may be easily mistaken for necrotizing fasciitis that, however, associated with fascial necrosis, polymorphonuclear infiltration of the dermis and fascia, angiitis, vasculitis, and often positive Gram stain [5]. Moreover, other neutrophilic dermatoses, that is, pustular drug reactions, pyoderma gangrenosum, erythema *elevatum diutinum*, bowel-associated dermatosis arthritis syndrome, and rheumatoid neutrophilic dermatosis have to be considered in the differential diagnosis. All of these dermatoses are associated with an underlying disease that may be diagnosed regarding symptoms, signs and additional examinations [6]. The treatment of the lesion consists of oral prednisolone and the lesions usually resolve after 1 month. The histopathological examination is important for the diagnosis, while the response to corticosteroids confirms the diagnosis [2, 7]. The development of NFD in patient with alcohol and tobacco consumption should lead to suspect head and neck malignancy, which may appear several months/years after the skin lesions. Therefore, it seems important to inform the patient about the risk of malignancy, especially in alcoholic or smoker patients, and to propose an adequate follow-up.



Fig. 1. Superficial hand lesions. Ulcerative edematous lesions of dorsum of both hands with erythematous papules and vesicles before (a) and after (b) treatment.

Statement of Ethics

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

Conflict of Interest Statement

Authors had no conflict of interest.

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Author Contributions

J.R.L. wrote the paper, received the patient in the initial ear, nose, and throat consultation. M.K. and S.S. treated the patient and corrected and approved the final draft of the paper. D.D. is the dermatologist who diagnosed the paraneoplastic syndrome, treated the paraneoplastic syndrome, and followed up the patient.

References

- 1 van der Meij EH, Epstein JB, Hay J, Ho V, Lerner K. Sweet's syndrome in a patient with oral cancer associated with radiotherapy. *Eur J Cancer B Oral Oncol*. 1996;32B(2):133–6.
- 2 Cravo M, Cardoso JC, Tellechea O, Cordeiro MR, Reis JP, Figueiredo A. Neutrophilic dermatosis of the dorsal hands associated with hypopharyngeal carcinoma. *Dermatol Online J*. 2008;14(7):5.
- 3 Cohen PR, Holder WR, Tucker SB, Kono S, Kurzrock R. Sweet syndrome in patients with solid tumors. *Cancer*. 1993;72(9):2723–31.
- 4 Weenig RH, Bruce AJ, McEvoy MT, Gibson LE, Davis MD. Neutrophilic dermatosis of the hands: four new cases and review of the literature. *Int J Dermatol*. 2004;43(2):95–102.
- 5 Stamenkovic I, Lew PD. Early recognition of potentially fatal necrotizing fasciitis. The use of frozen-section biopsy. *N Engl J Med*. 1984;310(26):1689.
- 6 Del Pozo J, Sacristán F, Martínez W, Paradela S, Fernández-Jorge B, Fonseca E. Neutrophilic dermatosis of the hands: presentation of eight cases and review of the literature. *J Dermatol*. 2007;34(4):243–7.
- 7 Weenig RH, Bruce AJ, McEvoy MT, Gibson LE, Davis MD. Neutrophilic dermatosis of the hands: four new cases and review of the literature. *Int J Dermatol*. 2004;43(2):95–102.