

SQUAMOUS CELL CARCINOMA OF THE NAIL BED: REPORT OF A CASE

Çiğdem A. ATAHAN, M.D., Arzu EREL, M.D., Mehmet Ali GÜRER, M.D.

Gazi University, Faculty of Medicine, Department of Dermatology, Ankara-Turkey
Gazi Medical Journal 2001; 12: 77-79

ABSTRACT : Squamous cell carcinoma of the nail bed is rarely seen and is usually mistaken for benign or infectious processes. In this study, a case of squamous cell carcinoma of the nail bed of the foot is described.

Key Words: Skin Cancer; Nail Disease; Soft Tissue Neoplasms.

INTRODUCTION

Squamous cell carcinoma (SCC) is a malignant tumor of epithelial keratinocytes. SCC arises as a result of exogenous carcinogens such as sunlight exposure, ingestion of arsenic, exposure to ionizing radiation (X-rays and gamma ray) and other etiologies (1). SCC arising from the nail bed or from the distal end of the digit under the nail is uncommon and often misdiagnosed as a benign condition. The cause of SCC of the nail bed is unknown. Depending on the localization and extent of lesion, surgical excision can be carried out (1, 2).

This report describes a 75-year-old male with squamous cell carcinoma of the nail bed.

CASE

A 75-year-old male had had subungual growths on the first toe of the right foot for two years (Fig. 1). Prior to applying to our clinic, the patient was treated with the diagnoses of fungal and bacterial infections; however, the lesion grew rapidly and ulcerated. In the history, no past



Fig. 1: SCC on the nail bed of the first toe.

history of exposure to irradiation, chemical carcinogens, burn scar or obvious evidence of impaired immunity existed. Systemic examination was normal. On laboratory examination, sedimentation rate, blood cell

counts, liver and kidney functions, blood glucose and electrolytes, blood lipids, urine analysis were normal. Analysis for human papilloma virus (HPV) DNA sample from the lesion was negative. Histopathologic examination of the biopsy specimen disclosed a poorly differentiated squamous cell carcinoma with atypical quality pleomorphic mitotic activity (Fig. 2). No metastasis and bone invasion were detected. Tumor markers were normal. A plastic surgeon was consulted about the case for which the patient was advised to have surgical treatment.

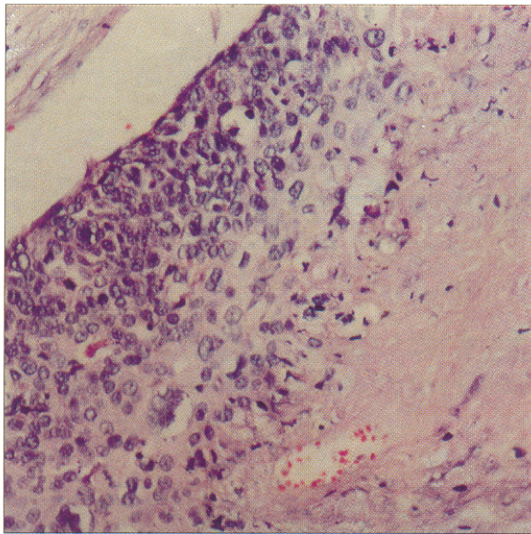


Fig. 2: Histopathological view of the lesion.

DISCUSSION

Squamous cell carcinoma (SCC) is the second most common form of skin cancer in white persons (1). However, SCC of the nail bed is rare and its metastasis is extremely unusual. The cause of SCC of the nail bed cannot always be identified and in some cases may be multifactorial (3). Chronic exposure to sunlight, trauma, chronic paronychia, burn scars, arsenic exposure, polycyclic aromatic hydrocarbons, genodermatoses, immunosuppression and human papilloma virus are risk factors for the development of this carcinoma (4). SCC arising at sites where previous viral warts existed has been described. The possible role of HPV 16 in the transformation of a viral wart into SCC has been suggested (5).

SCC of the nail bed is frequently mistaken for benign or infectious processes. The presenting

symptoms include paronychia, in-grown nail, nail separations, nail deformity, dyschromia of the nail plate, bleeding and pain (2, 6). Invasion should be suspected when bleeding, nodularity or ulceration occur (7).

The treatment of cutaneous SCC may be divided into local, regional and systemic control. These tumors have a high cure rate with standard modalities including curettage and electrodesiccation, thermocontrolled cryosurgery and surgical excision including Mohs micrographic surgery (1,8). Radiation therapy with a fractional dose schedule is also available to treat SCC.

To the knowledge of the authors, most of the cases reported in the literature are about SCC of the hand nail beds (2-5, 7); only a few studies involving toe nail beds have been reported (2, 9). We have found this case worthwhile to report since the lesion of the patient was on the nail bed of the foot. Furthermore, the lesion has been misdiagnosed for long periods of time. Thus, for early diagnosis of SCC, biopsy of the recurrent and persistent lesions of the nail bed is necessary.

Correspondence to: Arzu EREL, M.D.
Bilkent Üniversitesi
Lojman No: 22/4
Bilkent
06533 ANKARA - TÜRKİYE
Phone : 312 - 214 10 85 / 6101
Fax : 312 - 266 49 58
E-mail: aere1@med.gazi.edu.tr

REFERENCES

1. Johnson TM, Rowe D et al. Squamous cell carcinoma of the skin (excluding lip and oral mucosa). *J Am Acad Dermatol* 1992; 26: 467-84.
2. Nelson LM, Hamilton CF. Primary carcinoma of the nail bed. *Arch Dermatol* 1970; 101: 63.
3. Guitard J, Bergfeld WF et al. Squamous cell carcinoma of the nail bed: a clinicopathological study of 12 cases. *Br J Dermatol* 1990; 123: 215-222.

4. Frankel DH. Squamous cell carcinoma of the skin. *Hospital Practice* 1992; 28.
5. Moy RL, Eliezri YD et al. Human papilloma type 16 DNA in periungual squamous cell carcinomas. *JAMA* 1989; 261: 2669-2673.
6. Preaux J. Diagnostic problems related to lesions under and around fingernails. *J Dermatol Surg* 1976; 2: 305-307.
7. Mikhail GR. Subungual epidermoid carcinoma. *J Am Acad Dermatol* 1984; 11: 291-298.
8. Coskey RJ, Mehregan A, Fosnaugh R. Bowen's disease of the nail bed. *Arch Dermatol* 1972; 106: 79-80.
9. Lemont H, Haas R. Subungual pigmented Bowen's disease in a nineteen-year-old black female. *Clin Pathol* 1994; 84: 39-40.