Open Access Maced J Med Sci **electronic publication ahead of print,**
published on July 19, 2017 as https://doi.org/10.3889/oamjms.2017.112

ID Design 2012/DOOEL Skopje, Republic of Macedonia
Open Access Macedonian Journal of Medical Sciences.
Special Issue: Global Dermatology
https://doi.org/10.3889/oamjms.2017.112
eISSN: 1857-9655
Case Report

Interdigital Melanoma of the Foot Affecting Two Neighbouring Interdigital Spaces – Second Case Report

Uwe Wollina[1*], Carsten Rilke[2], Gesina Hansel[1], Dana Langer[1], Jacqueline Schönlebe[3], Georgi Tchernev[4]

[1]Department of Dermatology and Allergology; [2]Department for Vascular Surgery, Endovascular Surgery, Phlebology; [3]Institute of Pathology "Georg Schmorl",Academic Teaching Hospital Dresden-Friedrichstadt, Friedrichstrasse 41, 01067 Dresden; [4]Department of Dermatology, Venereology and Dermatologic Surgery, Medical Institute of Ministry of Interior, and Onkoderma Policlinic for Dermatology and Dermatologic Surgery, Sofia, Bulgaria.

Citation: Wollina U, Rilke C, Hansel G, Langer D, Schönlebe J, Tchernev G. Interdigital Melanoma of the Foot Affecting Two Neighbouring Interdigital Spaces – Second Case Report. Open Access Maced J Med Sci. https://doi.org/10.3889/oamjms.2017.112

Keywords: Melanoma; acrolentiginous melanoma; Mohs surgery; interdigital spaces; staging.

***Correspondence:** Uwe Wollina. Department of Dermatology and Allergology, Academic Teaching Hospital Dresden-Friedrichstadt, Friedrichstr. 41, 01067 Dresden, Germany. E-mail: wollina-uw@khdf.de

Received: 27-Apr-2017; Revised: 11-May-2017; Accepted: 19-May-2017; Online first: 19-Jul-2017

Funding: This research did not receive any financial support.

Competing Interests: The authors have declared that no competing interests exist.

Abstract

Melanoma affecting two interdigital spaces has been recently described by our group for the first time in medical literature. Here we present a second patient with acrolentiginous melanoma of the sole affecting the 1st and 2nd interdigital space. The tumour was removed by delayed Mohs surgery. Due to the extension of the melanoma, digit II and III had to be removed. Staging excluded metastatic spread. The tumour was classified as pT4bN0M0.

.

Introduction

Acrolentiginous melanoma (ALM) is an uncommon subtype in Caucasians. It is considered as a tumour with an unfavourable prognosis, mainly because of delayed diagnosis. In the German population, ALM patients are significantly older than the average of melanoma patients and the most common localisation is plantar [1]. Subungual ALM often is diagnosed in an advanced stage that needs functional amputation [2]. The preferred site of metastasis in ALM is bone [3].

In the case of primary misdiagnosis of ALM, the prognosis becomes even worse due to the delay of appropriate treatment [4, 5].

Recently, the first case of ALM involving two neighbouring interdigital spaces has been reported by Tchernev et al. (2017) [6]. Here, we report another case of this unusual presentation of ALM.

Case report

A 90-year-old female patient presented with a slow-growing lesion of the left foot pad which was easily bleeding for a couple of weeks. Her medical history was positive for diabetes mellitus type 2, pulmonary hypertension, arterial hypertension and hyperlipidemia. In 2009, she was diagnosed with colon cancer, and a hemicolectomy had been performed. She had a cataract surgery on her left eye in 2010.

On examination, we observed a 15 x 10 mm large, partially ulcerated tumour on the plantar skin with the involvement of interdigital spaces II and III and digits II and III (Fig. 1a). We performed diagnostic biopsies. Histologic examination revealed a largely amelanotic ALM with numerous MART-1 and Ki67-positive cells (Fig. 2).

We decided to perform complete surgical

removal by delayed Mohs technique (Fig. 1b-d). Histologic examination of the specimen confirmed the diagnosis of ALM, tumour thickness, Clark level. The first Mohs session was successful in removing the tumour but margins were positive for melanoma in situ component. The histologic investigation revealed a tumour thickness of 6.8 mm with Clark's level V.

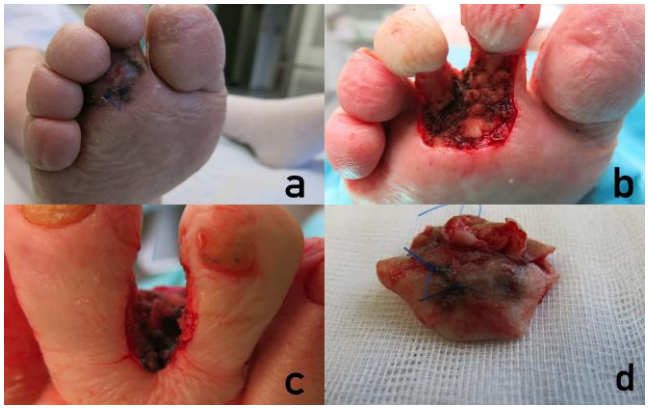

Figure 1: Amelanotic acrolentiginous melanoma involving two interdigital spaces. (a) Clinical presentation; (b) and (c) After first Mohs session; (d) Surgical specimen

In a second session, we achieved a complete resection with free margins, but digits II and III had to be sacrificed. After careful hemostasis, the wound was sutured (Fig. 3). Antibiotic prophylaxis with oral ciprofloxacin has been performed. A forefoot offloading shoe was prescribed to ensure undisturbed complete wound healing.

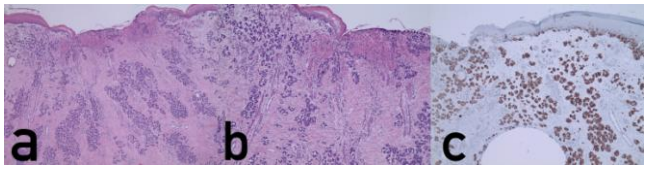

Figure 2: Histopathology of amelanotic acrolentiginous melanoma. (a) Overview and (b) detail of an amelanotic epitheloid cell proliferation in the mid dermis and increased number of melanocytic cells in the basal cell layer of the epidermis (Hematoxylin-eosin x 2 and x 4, respectively). Immunoperoxidase stain for MART-1 demonstrating numerous positive tumour cells (x4)

Staging with diagnostic ultrasound of lymph nodes and abdomen, and X-ray of lungs and the right foot did not show any signs of metastatic spread.

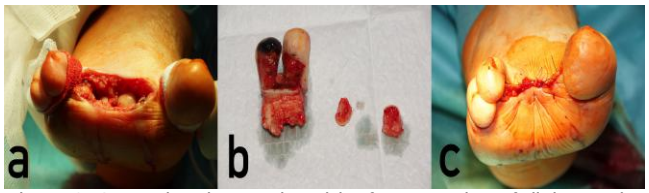

Figure 3: Second Mohs session. (a) After resection of digit II and II; (b) Resection specimen; (c) After suturing

Laboratory investigations: S100 0.113 µg/l (normal range < 0.125), lactate dehydrogenase 4.49 µkat/l (2.25-3.55), uric acid 397 µmol/l (140-340), creatinine 90 µmol/l (< 80), cholesterol 7.12 mmol/l (< 5.2), HbA1C 56 mmol/ml (20-42), neutrophils 0.20 Gpt/l (1.8-7.6), monocytes 5.90 Gpt/l (0-1.0).

Due to the patient's age, we decided to run a wait and see the strategy.

Discussion

In Germany, the number of annually documented melanoma cases increased by 53.2% between 2002 and 2011 with a statistically significant positive trend in the proportion of thin melanomas (stage UICC I). The overall 5-year relative survival for melanoma was estimated between 83.4% and 89.4% [7,8].

ALM is an uncommon tumour type with an unfavourable prognosis [9]. Ulceration was present in 38.6% of ALM, and average tumour thickness reached 3.5 mm in a study from Barcelona [10]. Patients with ALM are usually older that the non-ALM melanoma patients and the tumour size are larger at the time of diagnosis [11]. Also, ALM show distinct features of mutations. Comprehensive genomic and transcriptomic analysis of 34 ALM patients demonstrated the absence of UV-derived mutation signatures. PAK1 copy gains and somatic TERT mutations or germline events were detected in 41% of patients [12].

We present a peculiar, rare presentation of ALM of the foot pad with the involvement of two neighboring interdigital spaces that have been reported before only once [6]. We consider such a clinical presentation as a sign of an advanced tumour stage.

The treatment of choice is complete surgical excision. In the case of thick ALM, a safety margin of 2 cm is recommended to decrease the risk of local recurrence, while disease-free survival and melanoma-specific survival were not improved [13]. To achieve a complete tumour resection amputation is not always preventable – as shown in our patient [2].

References

1. Haenssle HA, Hoffmann S, Buhl T, Emmert S, Schön MP, Bertsch HP, Rosenberger A. Assessment of melanoma histotypes and associated patient-related factors: basis for a predictive statistical model. J Dtsch Dermatol Ges. 2015;13(1):37-45. https://doi.org/10.1111/ddg.12561

2. Guarneri C, Bevelacqua V, Semkova K, Tchernev G, Tempel S, Wollina U. Subungual acrolentiginous amelanotic melanoma treated with amputation of the distal and middle phalanges. Wien

Med Wochenschr. 2013;163(15-16):368-371. https://doi.org/10.1007/s10354-013-0194-4 PMid:23591855

3. Schoenewolf NL, Belloni B, Simcock M, Tonolla S, Vogt P, Scherrer E, Holzmann D, Dummer R. Clinical implications of distinct metastasizing preferences of different melanoma subtypes. Eur J Dermatol. 2014;24(2):236-241. PMid:24721680

4. Wollina U, Tchernev G, Chokoeva AA, Lotti T. Melanoma of the heel - a case series of a rare melanoma subtype. J Biol Regul Homeost Agents. 2015;29(1 Suppl):69-73. PMid:26016971

5. Sondermann W, Zimmer L, Schadendorf D, Roesch A, Klode J, Dissemond J. Initial misdiagnosis of melanoma located on the foot is associated with poorer prognosis. Medicine (Baltimore). 2016;95(29):e4332. https://doi.org/10.1097/MD.0000000000004332 PMid:27442685 PMCid:PMC5265802

6. Tchernev G, Lozev I, Pidakev I, Mangarov H, Grigorov Y, Cardoso JC, Popchristova E, Patterson JW, Lotti T, Pehlivanov G, Voicu C, Clatici VG, Wollina U. Interdigital melanoma affecting two neighboring interdigital spaces. First description in the medical literature. Wiener Med Wochenschr, 2017(in press). https://doi.org/10.1007/s10354-017-0558-2

7. Schoffer O, Schülein S, Arand G, Arnholdt H, Baaske D, Bargou RC, Becker N, Beckmann MW, Bodack Y, Böhme B, Bozkurt T, Breitsprecher R, Buchali A, Burger E, Burger U, Dommisch K, Elsner G, Fernschild K, Flintzer U, Funke U, Gerken M, Göbel H, Grobe N, Gumpp V, Heinzerling L, Kempfer LR, Kiani A, Klinkhammer-Schalke M, Klöcking S, Kreibich U, Knabner K, Kuhn P, Lutze S, Mäder U, Maisel T, Maschke J, Middeke M, Neubauer A, Niedostatek A, Opazo-Saez A, Peters C, Schell B, Schenkirsch G, Schmalenberg H, Schmidt P, Schneider C, Schubotz B, Seide A, Strecker P, Taubenheim S, Wackes M, Weiß S, Welke C, Werner C, Wittekind C, Wulff J, Zettl H, Klug SJ. Tumour stage distribution and survival of malignant melanoma in Germany 2002-2011. BMC Cancer. 2016;16(1):936. https://doi.org/10.1186/s12885-016-2963-0 PMid:27919243 PMCid:PMC5139127

8. Hiripi E, Gondos A, Emrich K, Holleczek B, Katalinic A, Luttmann S, Sirri E, Brenner H; GEKID Cancer Survival Working Group. Survival from common and rare cancers in Germany in the early 21st century. Ann Oncol. 2012;23(2):472-479. https://doi.org/10.1093/annonc/mdr131 PMid:21597096

9. Goydos JS, Shoen SL. Acral lentiginous melanoma. Cancer Treat Res. 2016;167:321-329. https://doi.org/10.1007/978-3-319-22539-5_14 PMid:26601870

10. Carrera C, Gual A, Díaz A, Puig-Butillé JA, Noguès S, Vilalta A, Conill C, Rull R, Vilana R, Arguis P, Vidal-Sicart S, Alós L, Palou J, Castel T, Malvehy J, Puig S. Prognostic role of the histological subtype of melanoma on the hands and feet in Caucasians. Melanoma Res. 2017. https://doi.org/10.1097/CMR.0000000000000340 PMid:28296711

11. Wada M, Ito T, Tsuji G, Nakahara T, Hagihara A, Furue M, Uchi H. Acral lentiginous melanoma versus other melanoma: A single-center analysis in Japan. J Dermatol. 2017. https://doi.org/10.1111/1346-8138.13834

12. Liang WS, Hendricks W, Kiefer J, Schmidt J, Sekar S, Carpten J, Craig DW, Adkins J, Cuyugan L, Manojlovic Z, Halperin RF, Helland A, Nasser S, Legendre C, Hurley LH, Sivaprakasam K, Johnson DB, Crandall H, Busam KJ, Zismann V, Deluca V, Lee J, Sekulic A, Ariyan CE, Sosman J, Trent J. Integrated genomic analyses reveal frequent TERT aberrations in acral melanoma. Genome Res. 2017;27(4):524-532. https://doi.org/10.1101/gr.213348.116 PMid:28373299

13. Lee KT, Kim EJ, Lee DY, Kim JH, Jang KT, Mun GH. Surgical excision margin for primary acral melanoma. J Surg Oncol. 2016;114(8):933-939. https://doi.org/10.1002/jso.24442 PMid:27642170