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

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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 planar [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 hemicolecotomy 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.

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.

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.

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 (0.1-0.6).

Due to the patient’s age, we decided to run a wait and see 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].

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