Multiple Primary Melanoma in a Thai Male: A Case Report

Kittisak Payapvipapong MD*, Pinyapat Kanechorn-Na-Ayuthaya MD*

*Division of Dermatology, Phramongkutklao Hospital School of Medicine, Bangkok, Thailand

Correspondence to:
Payapvipapong K, Division of Dermatology, Phramongkutklao Hospital, Bangkok 10400, Thailand.
Phone: 08-3881-1666
E-mail: kittisak66@yahoo.com

Melanoma is a malignant tumor of melanocytes and the most threatening skin cancer documenting one of the highest in mortality rates in comparison to other non-skin cancers due to its potential to metastasize. Although the global incidence of melanoma has increased, the melanoma-related deaths decreased owing to the fact that melanoma is curable under the condition that early diagnosis is made and treatment is undertaken as soon as possible. Patients with primary melanoma developing a second primary melanoma are less common compared to the general population developing the first. Not only is melanoma less commonly found in Thai patients but multiple primary melanomas (MPM) are rarely reported. The present report of a 48-year old Thai male who presented with asymptomatic black patch on the right big toe nail and an atypical mole on the back, both of which were histologically confirmed melanomas. Treatment included amputation of the right big toe and wide excision of melanoma on the back, which cleared the malignancy without recurrence until present. Although MPM are rare in Thais, the authors should be alert in cases displaying multiple moles for the possibility of melanomas. The total body examination, early diagnosis and regular follow-up are important to decrease the mortality rate in melanoma patient.

Keywords: Multiple primary melanoma, Melanoma, Hutchinson’s sign, Dermoscopy, Menzies method

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of a dermoscopy, early malignant transformation was detected leading to immediate diagnosis and management.

Case Report

A 48-years-old Thai man presented at the dermatological department after noticing an asymptomatic black patch under right big toe nail for 3 years. The lesion gradually enlarged and spread to the tip of the right big toe (Fig. 1). He denied a history of sunburn and family history of skin cancer.

Physical examination revealed a dark inhomogeneous pigmented patch 1.5x1.5 cm covering the entire right big toe nail with periungual extension of black pigmentation towards the hyponychium, contributing to longitudinal melanonychia of the big toe (Hutchinson’s sign). Multiple hyperpigmented macules and patches varying in size were also present on the trunk and extremities. Some lesions were asymmetrical, while others on the upper neck, back and thighs displayed varigate pigmentation and diameter greater than 6 mm (Fig. 2). Inguinal lymph nodes and other group nodes were not palpable.

Dermoscopic examination with Dermlite (Dermlite 3 Gen, LLC, Dana point, CA, USA) at 10-fold magnification coupled with a Nikon Coolpix 995 digital camera (Nikon Corporation, Tokyo, Japan) was performed for pigmented lesions bearing atypical presentations (Fig. 3). Excisional biopsies were done where possible except at the nail bed, where incisional biopsy was preferred.

The differential diagnosis of an asymptomatic patch on the entire nail included melanoma, blue nevus and black heel. Nail bed biopsy revealed nests of melanocytes with cytological atypia in the dermis and dermoeidermal junction, graded as Clark 4 stage. On the other hand, a skin biopsy of the atypical mole on the back was benign (Fig. 3A-D) where pathology demonstrated in Fig. 3E showing acanthosis, fusion and elongation of the rete ridges with melanocytic hyperplasia in nests, individual cells in the basal cell layer and atypia, without dermal infiltration (Fig. 4). HMB-45 staining was positive (Fig. 5) and melanoma in situ was confirmed. Laboratory investigations were normal but genetic analysis was not done in the present case.

The diagnosed was MPM, comprising of acral lentiginous melanoma at right big toe (TMN stage IA) and in situ melanoma on the back. Amputation of the

Fig. 1 Acrallentiginous melanoma at right foot.

Fig. 2 Atypical mole at back.
right big toe with groin node resection was executed, while wide excision with 1 cm margin was done for melanoma on the back. Both lesions were devoid of lymphatic vascular and nerve invasion. No complication occurred after the operation and no adjuvant chemotherapy was given. The patient had been followed-up by full body examination at our hospital regularly until present and remained free of atypical lesions.

Discussion

Melanoma is a malignancy of melanocytes and the most lethal of skin cancers. Although melanoma is found in only 4% of all skin cancers, it is responsible for the highest number of skin cancer-related deaths worldwide. It is categorized into four major clinical subtypes: superficial spreading melanoma, nodular melanoma, lentigo maligna and acral lentiginous melanoma. Acral lentiginous melanoma is not related to sun exposure and is more common in Asians than Caucasians. It can involve the palms, soles and nail plates.

Dermoscopy is an in vivo method reported as useful for early recognition of malignant melanoma and the differential diagnosis of pigmented lesion of the skin. Using the Menzies method, diagnosing malignant melanoma requires that a lesion must lack both negative features and comprise of 1 or more of the nine positive features as shown:

Negative features (must not be present)
- Symmetry of pattern
Various criteria for the diagnosis of primary malignant melanoma in patients with multiple lesions are mentioned in literature. Mihm and Kornberg et al suggested histological criteria being helpful in distinguishing cutaneous metastasis from primary lesion. Cutaneous metastasis may show epidermotropism, thinning of the epidermis, distention of the dermal papillae by malignant melanocytes and a dermal infiltrative component that is present and lateral to the epidermal element and dermal lymphatic permeation.

The prognosis of MPM and single melanoma differ. Several risk factors of MPM include Celtic phenotype (European), benign pigmented nevi, history of non-melanoma skin cancer and family history of melanoma. In addition, to pigmentary characteristics or sun exposure. Ironically, a study by Moseley et al found 5 years survival rate of multiple lesions is better than a single lesion. The presence of three or more primary melanomas is shown to exhibit a superior survival rate, as explained by the resistance to a second tumor from animal models carrying carcinogen-induced tumors. In recent years, many common tumor antigens are described in human melanoma but the role of immunological surveillance recognition antigen is unclear. The authors predict that the patients with 3 or more primary melanomas might develop a functional immunization to common melanoma tumor antigen, which may lead to prolonged survival.

After total body examination, dermoscopy and melanoma staging in the present patient, the authors found many atypical pigmented lesions on the back and one lesion diagnosed as melanoma by Menzies method. Furthermore, multiple nodal enlargement at the groin was detected by ultrasound. Unfortunately, lymphatic mapping was not available in our institution; however, sentinel lymph-node biopsy was achieved and showed no evidence of metastasis. After surgical treatment, there were no complications. The authors suggested routine self-examination and dermoscopically every 6 months in this patient.

The present report is a case of MPM in a Thai patient exhibiting superficial spreading and acral lentiginous melanoma subtypes. With the aid of dermoscopy, early malignant transformation was detected leading to prompt diagnosis and management. Although melanoma and MPM are rare cases in Thai, prognosis depends on the early diagnosis. Total body examination and use of a dermoscope are used in atypical lesions to find out the early malignant changes that significantly decreases mortality and morbidity.

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Potential conflicts of interest
None.

References
รายงานผู้ป่วย multiple primary melanoma (MPM)

กิตติศักดิ์ พิบูลย์เจริญ, ภิญญานุศริก คณกระ ณ อนุภาพ

Malignant melanoma เป็นมะเร็งที่มีความรุนแรงและมีอัตราการตายสูง การวินิจฉัยหรือรักษาได้ยากออกมากจากatient ของงาน multiple primary melanoma พบในผู้ชายอายุ 48 ปี ซึ่งมีลักษณะของสิ่งของที่เป็นภูมิคุ้มกัน, ผลการตรวจทางพบว่าผิวหนังมีสิ่งของผิวหนังที่มีแมลง ที่ทำการละเอียดด้วย dermoscope ผลการตรวจทางโฟโตโมชั่นการวินิจฉัย malignant melanoma ได้ทำการรักษาโดยการผ่าตัด รอบโรคที่เท้าและหลัง