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Case Report

A Chinese patient with multiple primary melanomas

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Abstract Melanoma is a highly malignant skin tumor with an increasing incidence in Asian Population. We had a Chinese man with multiple primary melanomas on the chest and head region. The lesions were having irregular boundaries, with variable depth, and the patient was free of systemic symptoms. The diagnosis was confirmed by the immune-histopathological examination. Lesions were surgically removed. Risk factors include age, white race, sun-exposed parts, family history, and multiple nevis.

Key words
Melasma, Asian population, incidence.

Introduction

Melanoma is a highly malignant skin tumor with increasing incidence. The incidence rate in the Asian population is much lower than that in Europe and the USA. Asian patients are mostly acral melanoma and multiple primary melanomas are very rare. Studies have shown that the incidence of multiple primary melanomas is closely associated with MEN, CDK4, and CDKN2A gene mutations, MC1R, and microphthalmia-associated transcription factor (MITF) E318K mutation.[1-3] We report a Chinese patient with multiple primary melanomas.

Case report

We report the case of a 50-year-old man with a 7-years old lesion in the right chest and a 5-years old lesion in the right temporal. The lesions gradually increased with no systemic symptoms. The patient denied any systemic disease and family history. Physical examination: No superficial lymph nodes enlargement, and no abnormality with heart and lung.

Dermatological examination: 4×3cm with clear boundary, irregular brown to black patches on the right chest. A well-defined, brown-to-black patch of 2×1cm over the right temporal **(Figure1,2)**. The diagnosis of melanoma was confirmed by histologic examination. The invasion depth of the right chest tumor was about 0.22mm, while the invasion depth of the right temporal tumor was about 0.58mm **(Figure 3,4)**. Immunohistochemistry showed that HMB45 and S100 were found positive and 40% positive with Ki-67; Doppler ultrasound showed no enlargement with superficial lymph nodes; PET-CT showed no visceral involvement. Mohs micrographic surgery was performed and followed up **(Figure 5,6)**.

Discussion

This case is characterized by multiple primary melanomas in Chinese male patient. The lesions

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Figure 1,2 4×3cm with clear boundary irregular brown to black patches on the right chest. Brown-to-black patch of 2×1cm over the right temporal.

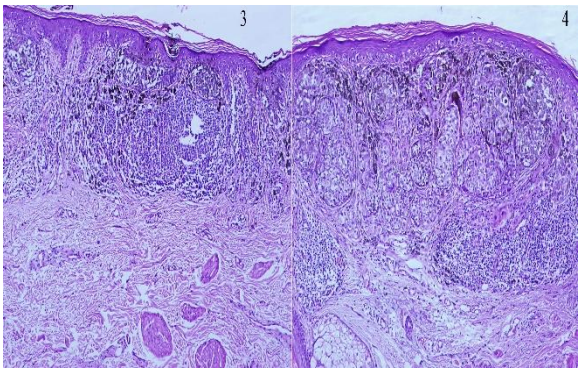

Figure 3,4 Epidermal atrophy, scattered or nestled tumor cells can be seen at the junction of epidermis and dermis, some tumor cells move up, tumor cells contain pigment particles and abnormal changes, and lymphocyte infiltration in dermis. Breslow depth of the right chest tumor was about 0.22mm, Breslow depth of the right temporal tumor was about 0.58mm.

Figure 5,6 Follow up two months after surgery.

were located on the head and trunk and the disease duration was 5-7 years. The interval between the two lesions was 2 years. The lesion in the right temporal area was deeper than that of the chest. No metastases were found in the superficial lymph node with B-ultrasound and PET-CT examination. The common type of melanoma in Asian populations is the acral subtype, which is a mostly single lesion and multiple primary lesions are rare.

The incidence of melanoma continues to increase more rapidly than that of other solid tumors. Over the past decade, the incidence of melanoma has increased by approximately 38%, whereas the death rate from melanoma has increased by 26%.[4,5] Incidence rates of cutaneous malignant melanoma are increasing worldwide in the fair-skinned population. Research has shown that the percentage of patients who develop multiple primaries ranges from 0.2% to 8.6%.[6,7] Important risk factors for developing multiple primary tumors are age, fair skin type, family history of melanoma, and the presence of many or large naevi.[8,9] The commonest site involved was the head and neck region, suggesting the role of sun exposure in the development of multiple primary melanomas.[10] A recent retrospective study showed the hazard ratio of death to be twice as high in patients who had two melanomas versus a single melanoma.[11] Prognosis is worse for patients with multiple primary melanomas than those with a single melanoma. 13% of patients were diagnosed with a second melanoma at the same time as the first melanoma, supporting the benefit of full skin examination at the patient's first visit. Our findings highlight the importance of a full skin examination and ongoing skin surveillance in patients diagnosed with melanoma.

Conclusion

Melanoma is a European malignant skin tumor, most common in the Asian population. Risk factors include age, white race, sun-exposed parts, family history and multiple naevi.

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