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Rare case of hypodiagnostics of subungual melanoma complicated by paraungual panaritium

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Summary. Subungual melanoma in coexistence with the purulent inflammatory process occurs rather rarely in clinical practice. In spite of its outer localization and accessibility of examination patients are diagnosed mainly with III-IV stages by primary care physicians. We report our experience with clinical status of a 56 year old man that was inaccurately diagnosed with paraungual panaritium that coexisted with the purulent inflammatory process that led to the wrong surgical treatment. The presented case report shows that the doctor may reach an accurate diagnosis earlier with the use of stepwise algorithmic methods for diagnosing malignancy. Reaching the right diagnosis can be achieved taking into consideration both clinical and dermatoscopic clues.

Key words: subungual melanoma, acral melanoma, skin melanoma

Introduction

One of the main problems of early diagnosis of skin melanoma is timely case detection. Skin melanoma morbidity is increasing rapidly in the whole world while skin melanoma mortality rate is not decreasing considerably. At the same time the frequency of cutaneous melanoma and skin cancers occurrence ranges widely in different countries (1). On the whole, there is a widespread growth of morbidity and mortality rate (2). Throughout the world cutaneous melanoma has the highest mortality rate of all skin neoplasms, and in most cases its treatment starts with the distribution of tumor outside the dermis (3). The fundamental methods of making a diagnosis is the clinical method. It includes skin examination, questioning, asking about complaints and anamnesis with the evaluation of tumor according to numerous well-known mnemonic algorithms (the ABCD rule, the EFG rule). But it isn't characterized by a high degree of accuracy (about 37%) when it is used by primary care physicians. As a result in 32,5% of cases cutaneous melanoma is detected at III-IV stages. It worsens the prognosis of the disease. But when primary care physicians study criteria and algorithms of malignant neoplasms the accuracy of diagnostics increases considerably and ranges from 76,2 to 84 % (4-7).

Case report

In 2011 a 56 year old Russian man came to the Oncological centre because of ulcer on the surface of the tumor, color change at the basis of nail plate, pain in the area of the 1st finger on the left hand. While history taking, the patient related that the day before he had had a trauma. He hammered a nail unsuccessfully and he accidentally hit the finger with a hammer. Then he had a pain. Three days later, he came to the doctor. The patient couldn't say whether there had been pigmentation at the basis of nail plate before he consulted the doctor. The patient had skin phototype 2. On physical examination his skin was of ordinary color, peripheral lymphatic nodes were not enlarged. Other organs and systems were without evidence of any pathology.

Additional instrumental examinations such as ultrasonic examination of the abdominal organs and peripheral lymph nodes, X-ray examination of the chest organs were not conducted. On visual examination the surgeon made a preliminary diagnosis of paraungual panaritium. The surgical treatment was provided – dissection and drainage of the purulent cavity. Pigmentation and ulcer on the surface of the tumor at the basis of nail plate were considered to be manifestations of the inflammatory process. The patient was provided with out-patient care. He went for the dressing. The course of oral antibiotics therapy was administered. As a result of the complex treatment, no evidence of recurrence was found. Three months later, the localized recurrence in the area of the middle phalanx was detected. Pigmented lesions at the basis of nail plate and ulcer on the surface of the tumor were preserved. The patient complained about the increased lymph nodes in the left axillary area. The malignant process was suspected and the patient was referred to the Samara Regional Oncological Dispensary for further evaluation.

In the Dispensary a complex research was conducted according to ASCO standards which included examination (figure 1), digital dermatoscopy without immersion (figure 2) and doing sampling of biological material with the subsequent histological investigation and the diagnosis of skin melanoma was confirmed. On ultrasound examination of regional lymph nodes evidence of the metastatise process was discovered in the left axillary lymph nodes. Then the patient was given a combined surgical treatment which included

Figure 1. Visual examination

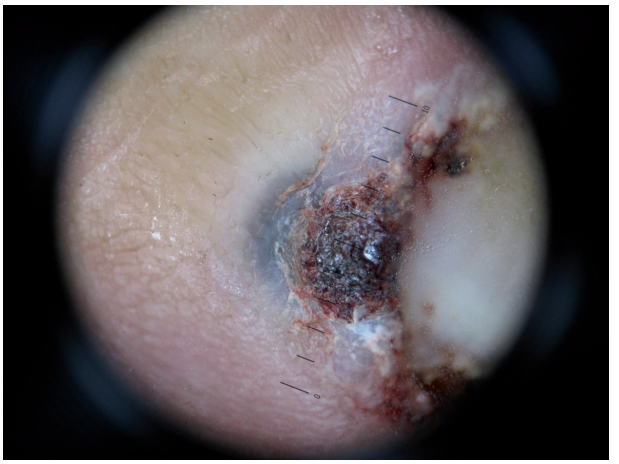

Figure 2. Digital dermatoscopy without immersion

amputation exarticulation of the thumb 1st finger of the left hand and dissection of the left axillary lymph node. On histological examination of the amputation specimen and a block of peripheral lymph nodes the diagnosis of skin melanoma was confirmed. Immunotherapy was administered. The patient was treated with Interferon alpha in a dose of 3 million IU 3 times a week subcutaneously for long duration. From 2011 to 2017, the disease process has remained lesion was controlled without any progression.

Discussion

Cutaneous melanoma is an unpredictable tumor. In spite of its outer localization it is often poorly diagnosed at an early stage. Cutaneous melanoma makes up rather a small group of all kinds of skin cancer. Subungual melanoma occurs rarely (8). Clinical symptoms of subungual melanoma are not well-known (9). The average age of patients with cutaneous melanoma is 56 years (10). Such localization correlates with sex and age to a certain extent. Melanoma in the area of fingers in coexistence with the secondary infection can be confused with granuloma (11).

In the presented case it was difficult to differentiate the diagnosis at the stage of giving medical aid in the local polyclinic. Cutaneous melanoma symptoms coexisted with the injury inflammation, rare localization and rare occurrence in the clinical practice of the surgeon in the local polyclinic. After the appearance

of metastases in the left axillary lymph nodes, the patient was given a combined surgical treatment which included amputation of the left thumb and dissection of the left axillary lymph node basin.

In cases when a clinical diagnosis is not possible dermatoscopy can be used simply to confirm the clinical diagnosis (12).

Conclusion

The combination of the inflammatory process, subsequent to nail plate injury made it difficult to make the diagnosis at an early stage although to the current time it has not led to. But it unfavourable consequences.

The case of subungual melanoma combined with the inflammatory process and injury is rather rare. Primary care physicians should follow 'the chaos and clues' in pigmented and 'prediction without pigment' algorithm in non-pigmented skin lesions in assessing patients with suspicious pigmented lesions using a dermatoscope. The 'chaos and clues' and 'prediction without pigment' algorithms lead to a careful examination for clues to subungual melanoma. Skilled use of these algorithms helps to increase diagnostic accuracy for both melanocytic and non-melanocytic skin malignancies (13).

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