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Case report

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DERMOSCOPY OF MELANOMA

SUMMARY

Early detection of malignant melanoma is one of the greatest challenges of dermatologic practice today. Dermoscopy is an in vivo method for the early diagnosis of malignant melanoma and differential diagnosis of pigmented lesions of the skin.

The paper presents the case of an 85-year-old man with pigmented skin lesion in the left mandibular region. The pigmented skin lesion demonstrated clear dermoscopic features of malignant melanoma. Total score was 7 points according to 7-point checklist. Pathohistological examination confirmed diagnosis of melanoma.

Key words: **dermoscopy, malignant melanoma, 7-point checklist**

INTRODUCTION

Dermoscopy is a simple and inexpensive diagnostic technique that permits the visualization of morphologic features that are not visible to the naked eye, forming thus the link between macroscopic clinical dermatology and microscopic dermatopathology. It is an in vivo method for the early diagnosis of malignant melanoma and differential diagnosis of pigmented skin lesions. Over the past years, dermoscopy has been known by a variety of names, including skin-surface microscopy, epiluminescence microscopy, incident-light microscopy, dermatoscopy, and videodermatoscopy. The term "dermoscopy", however, currently enjoys the greatest international consensus.

The Board of the Consensus Netmeeting agreed on a two-step procedure for the classification of pigmented skin lesions. The first step is the differentiation between a melanocytic and a non-melanocytic lesion. If the lesion is determined to be of melanocytic origin, step two is to determine if the lesion is benign, suspect or malignant. To accomplish this, four well-studied algorithms are commonly used: pattern analysis, the ABCD rule of dermatoscopy, Menzies scoring method, and the 7-point checklist (1).

All of the melanocytic algorithms have melanoma-specific criteria. 7-point checklist distinguishes 3 major criteria and 4 minor criteria (Table 1). Each major criterion has a score of 2 points, while each minor criterion has a score of 1 point. A minimum total score of 3 is required for the diagnosis of malignant melanoma.

Table 1. The 7-point checklist according to Argenziano et al (2)

Criteria	7-point score
Major criteria	
Atypical pigmented network	2
Blue-white veil	2
Atypical vascular pattern	2
Minor criteria	
Irregular streaks	1
Irregular pigmentation	1
Irregular dots/globules	1
Regression structures	1

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Melanoma is a highly malignant tumor with an alarming increase in incidence over the last few decades. Melanoma incidence and mortality rates are influenced by gender and geography. In Europe, melanoma occurs with higher frequency among women than men, whereas in Australia and America the incidence is slightly higher in men (3). Malignant melanoma is very rare before the age of 20 (4). Melanoma is the second most common cancer in men aged 30-49 and fourth most common cancer in men aged 50-59 (5). It is the most common cancer in women aged 25-29 and second cancer in women aged 30-35 (6).

Early detection of malignant melanoma is one of the greatest challenges of dermatologic practice today. Dermoscopy has been recently proven as a valuable method for improving the clinical diagnosis of melanoma.

CASE REPORT

A 85-year-old cavcasian man was referred to evaluate his pigmented skin lesion in left mandibular region by digital dermoscopy. There was a negative personal and family history for dysplastic nevi or melanoma, but a personal history of excessive sun exposure. Physical examination showed total nevi count more than 20. Frickle index was negative.

Patient noticed a black pigmentation in the left mandibular region twenty years ago. This pigment skin lesion was spreading over the years. He did not refer for skin examination till the moment we saw him. Fifteen days before examination, lesion became exulcerated, without injury.

Clinical skin examination showed black pigmentation in the left mandibular region, irregularly shaped, sharply demarcated from the surrounding skin. Subauricularly, there was an ulceration with crust, *Figure 1*.

Figure 1. Clinical image of malignant melanoma

Ultrasonographic examination

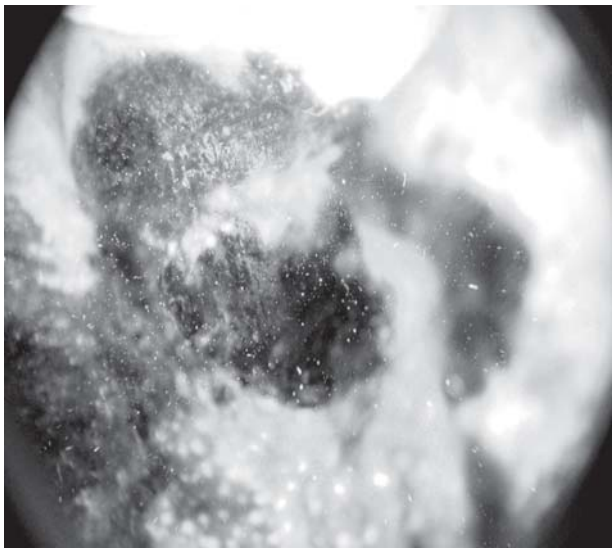
For the ultrasound examination, we have used Dermascan C (cortex technology, Denmark) high frequency (20 MHz) ultrasound equipment.

Echogram of the lesion showed 0.37 mm thick entry echo, while the lesion itself was presented as nonechogenic dome-like formation with relatively clear borders and vertical diameter of 4.32 mm. Throughout surrounding dermis there is a band-like hypoechoic shade poorly demarcated from the surrounding skin.

Dermoscopic examination

For dermoscopic analysis, we used Dermlite® photo on Nikon Coolpix 4500 photo camera (with 4.0 megapixels resolution) and the obtained results were analyzed by using Mole Max software. Digital dermoscopic examination of lesion demonstrated obvious melanoma-specific criteria. The lesion demonstrated asymmetry of contour, color and structure, with atypical pigmented network and vascular pattern. It also contained regression structures in central part of the lesion. Brown globules of different sizes were seen at the right part of the lesion and blue-whitish area was seen in central part of the lesion, *Figure 2*.

Figure 2. Dermoscopic image of malignant melanoma



This lesion was evaluated by digital dermoscopy and corresponded to malignant melanoma (7-point checklist - 7 points).

Since the diagnosis included melanoma, an initial incisional biopsy was not performed, and the entire area was excised. The histological analysis confirmed diagnosis of malignant melanoma.

DISCUSSION

The incidence of malignant melanoma has risen dramatically in recent years despite increased awareness and enhanced behavior patterns (7).

The diagnosis of melanoma has always been a real challenge for dermatologists and it will probably remain so in the third millennium. In the recent years, the in vivo diagnosis of pigmented skin lesions by means of dermoscopy may improve the clinical approach to melanocytic neoplasms providing further diagnostic information besides those visible by naked eye (8). The analysis of these extra criteria not visible with the naked eye has been shown to significantly improve the diagnosis of melanocytic, nonmelanocytic, benign, and malignant skin lesions (9-11). It raises the diagnostic accuracy of melanoma to 80% from about 65 % with the naked eye (12). Each of the established algorithms used to analyze melanocytic skin lesions has melanoma-specific criteria.

In our case, asymmetry of contour, color and structures, atypical pigmented network, vascular pattern, irregular brown globules, regression structures and blue-whitish area in central part of the lesion demonstrated clear dermoscopic features of mailgnant melanoma. The minimum score of 3 points according to 7-points checklist require the diagnosis of malignant melanoma. Our score was 7 points according to this checklist.

Melanoma-specific criteria can be seen in both benign and malignant lesions. However, they are more specifically found in melanomas. No single criterion by itself is 100% diagnostic of melanoma. However, if several melanoma-specific criteria are identified, the lesion should be excised as in our case (13-15).

Some lesions, especially early melanomas, may lack specific dermoscopic features and are difficult to be diagnosed even with dermoscopy (16). It has been demonstrated that early recognition of these “featureless” melanomas can be enhanced by follow-up with digital dermoscopy.

CONCLUSION

The examined lesion was clinically very suspect of melanoma. Dermoscopy showed features which supported clinical diagnosis. Definitive diagnosis was confirmed by pathohistology. We can conclude that dermoscopy may be very useful additional diagnostic method in diagnostics of melanoma.

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DERMOSKOPIJA MELANOMA

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SAŽETAK

Rano otkrivanje malignog melanoma jedan je od najvećih izazova dermatologije danas. Dermoskopija predstavlja in vivo metod za rano postavljanje dijagnoze melanoma i za diferencijalnu dijagnozu pigmentnih promena kože.

Prikazan je slučaj 85-godišnjeg pacijenta sa pigmentnom promenom na koži leve mandibularne regije. Promena je pokazala jasne dermoskopske karakteristike melanoma. Prema 7-poena listi, ukupni skor bio je 7. Patohistološkim ispitivanjem potvrđena je dijagnoza melanoma.

Ključne reči: **dermoskopija, maligni melanom, 7-poena lista**