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The Analysis of Reasons for Malignant Skin Tumors Late Diagnosis

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ORIGINAL PAPER

SUMMARY

Introduction: Timely diagnosis is a prerequisite for the successful treatment of malignant skin tumors. Late diagnosis leads a patient into a situation of losing valuable time and chance for cure. **Material and methods:** A prospective study was conducted from February 2006 until August 2011 which analyzed the reasons that led to establishing the diagnosis of malignant skin tumors in 220 patients. Patients were divided into two groups: Group A (102 patients), patients with diagnosed melanoma, and group B (118 patients) of patients suffering from basocellular (BCC) and planocellular cell (PCC) skin cancer. Parameters for comparison of analysis results were the reasons for coming to examination and reasons for not coming to the examination, because of which skin cancers were not diagnosed in time. **Goal:** To determine the factors that influences the establishment of late diagnosis and treatment of skin tumors. **Results:** It was confirmed that the prejudices of patients that tumors of the skin „should not be operated because it is dangerous“ is the main reason for late diagnosis. At the same time it is confirmed that the belief that it is unnecessary to operate congenital changes of the skin is the second most important reason for delayed diagnosis of malignant skin tumors.

Key words: basocellular, late diagnosis, melanoma, planocellular, tumors of the skin.

1. INTRODUCTION

The most common malignant skin tumors are basocellular carcinoma (BCC), planocellular carcinoma (PCC) and melanoma. Regardless of whether melanoma arises from moles or it is an alteration of primary malignant form, timely diagnosis is of outmost importance (1, 2). Melanoma may, if it is congenital, for years to remain idle and so offers possibility for timely diagnosis (3). During the phase “in situ” when the skin melanoma thinner than 1 mm, there is a possibility to cure the disease (4, 5). Melanomas are tumors for which is difficult to predict their behavior (3). Congenital melanocytic changes or those that are remembered from childhood often are places where malignant alteration longer remains underdiagnosed. The changes that have occurred “de novo” draw more attention to it (6).

Timely, accurate diagnosis is the only chance to cure melanoma (3, 4, 5, 6). Wrong, false positive diagnosis of melanoma, has consequences for the whole range of diagnostic procedures, psychological stress for the patient, family, etc. Opposite to this, the clinical evaluation of malignant benign pigmented lesions, resulting in a situa-

tion where the patient loses valuable time and chance for cure. Although melanoma can be amelanotic, the most common diagnostic problem is distinguishing harmless moles from melanomas (2, 3, 4, 5, 6, 7).

Basocellular carcinomas usually appear as single lesions, although the appearance of several lesions simultaneously or one after the other is not uncommon. About 40% of patients with basocellular carcinoma will have one or more basocellular carcinomas in 10 years (8). Basocellular carcinoma usually appears in adults, although they can be encountered in children (9).

Planocellular carcinoma (PCC) can occur anywhere on the skin and mucous membranes. It rarely occurs in normal, intact skin. Most often appears on sun-damaged skin, either as the initial tumor or from actinic keratosis. Besides sun-damaged skin, planocellular carcinoma is most commonly found in the scars of burns (10).

2. GOAL

The goal is the analysis of reasons why patients later reported the examination and treatment of malignant skin tumors.

3. MATERIAL AND METHODS

A prospective study was conducted from February 2006 until August 2011 which analyzed the reasons for late diagnosis of malignant skin tumors in 98 patients who were treated in a given period at the General Hospital of Doboj and 122 patients who were treated in a given period at the Clinical Center of Sarajevo University. Subjects were divided into two groups. Group A (102 patients), patients with diagnosed melanoma, while in group B (118 patients) consisted of patients suffering from basocellular (BCC) and planocellular (PCC) skin cancer.

Parameters for comparison of results of analysis were the time elapsed since the change occurred to the examination, the reasons for first arrival for review and the reasons for not coming to the timely review.

All patients underwent digital skin dermoscopy in order to determine the character of skin lesions "in vivo", so before surgical intervention, or decisions on possible surgical treatment.

4. RESULTS

The results of the analysis of causes for late diagnosis in the examined groups are shown in Tables 1, 2 and 3. Parameters for comparison were: reasons for arrival of respondents to dermoscopic examination and possible surgery and the reasons for not coming to the timely examination.

Time elapsed from the occurrence of changes until examination	Group A	Group B
Probably congenital	32(31.2%)	7(6%)
Up to 2 years	57(56.3%)	35(30%)
2-5 years	13(12.5%)	76(64%)
Total	102(100%)	118(100%)

Table 1. Time elapsed since change occurred until examination

Reasons for examination	Group A	Group B
By doctor's advice	9(8.5%)	14(12%)
Due to surgery on personal demand	93(91.5%)	104(88%)
Total	102(100%)	118(100%)

Table 2. Reasons for coming to examination

Fear from surgery	Group A	Group B
YES	11(10.4%)	19(16%)
NO	91(89.6%)	99(84%)
Changes on skin should not touch		
YES	59(58.3%)	21(18%)
NO	43(41.7%)	97(82%)
The change is congenital		
YES	25(25%)	7(6%)
NO	77(75%)	111(94%)
The change was not noticed		
YES	25(25%)	7(6%)
NO	77(75%)	111(94%)
The change did not considered as dangerous		
YES	4(4.2%)	59(50%)
NO	98(95.8%)	59(50%)
Total	102(100%)	118(100%)

Table 3. Reasons for omitting previous examinations

Statistical analysis of differences between group A and group B reveals the following:

- There was statistically significant difference in the characteristics of the *time elapsed since the appearance of change, before the examination* ($p < 0.01$, 99%), $Z = 2.63542$
- There is no statistically significant difference in the characteristics of the *reasons for not coming to the examination, fear of surgery* ($p > 0.01$).
- There was a statistically significant difference in the characteristics of the *reasons for not coming to the examination, "changes should not be touched"* ($p < 0.01$, 99%), $Z = 2.213221$
- There is a high statistically significant difference in the characteristics of the *reasons for not coming to the examination-"change is congenital"* ($p < 0.01$, 99%), $Z = 3.723443$
- There was a statistically significant difference in the characteristics of the *reasons for not coming to the view-"change is not seen"* ($p > 0.01$).
- There is a high statistically significant difference in the characteristics of the *reasons for not coming to the examination-"change is not considered dangerous"* ($p < 0.01$, 99%), $Z = 2.96001$

5. DISCUSSION

Although melanoma is the most obvious change of the skin, late diagnosis often happens. Patients often come to examination when the change on the skin definitely arouses their concern, whether it bleeds or rapidly changes shape or color (5).

In the diagnosis of melanoma most trouble causes nevi (moles), which macroscopically resemble melanoma. Problematic melanocytic lesions mainly belong to dysplasia (1, 2, 3, 4, 5, 6). The clinical diagnosis of melanoma is often unreliable (6). On the contrary, digital dermoscopy is correlated with pH analysis in 98-100% cases (6). Dermoscopic diagnosis is available for determining the character of skin lesions prior to surgical intervention. All of our patients underwent digital dermoscopy of skin changes.

In our patients from group A, i.e., patients with malignant melanoma, the most common period for coming to examination was up to two years after the skin changes were noticed, while in the group B, or patients suffering from basocellular or planocellular skin cancer after a period of 2-5 years, which proved to be statistically significantly different. Patients in group B gave less importance to skin changes. Recent studies show that virtually there is no anatomical region that is "safe" of melanoma, regardless of whether they are covered or exposed parts of the body (7). This fact is confirmed by our research.

Basocellular carcinoma (BCC) is usually located on the face and scalp, while planocellular carcinoma (PCC) is more common on the lower third of the face and other body regions (8-14). In the group A, skin changes were concentrated on the face, back and lower limbs, while in group B the predominant changes were on the head, which is consistent with data in the literature. Despite the possibility that skin changes, due to the anatomical

position, are not being duly noted, small number of our patients reported later to the examination and treatment for such a position of a change. By this characteristic both groups A and B are not statistically different. Of our patients in group A, 9 of them (8.5%), was referred to dermoscopic examination by a doctor-dermatologist, while in group B that number is 14 patients (12%). All other patients came to examination on their own initiative, after they were informed about dermoscopy in another way. By this characteristic, between group A and group B there was no statistically significant differences. Respondents most often came to examination only when they noticed obvious changes in the skin or when they started to bleed, change shape or color. By these characteristic statistically significant differences is not found among the studied groups.

Because of injuries to skin changes in group A to the examination reported 17 (16.6%) patients and in group B 26 (22%) patients. It is believed that the injuries cause malignant alterations of the skin in only about 2% of cases (2,5). So it is more likely to report injuries of the skin, as a reason for coming to examination, which can be taken only as a rationalization of the problem, and subconscious escape of respondents from the thoughts about the disease. There are many reasons why patients do not come to the examination of the skin and are too late for timely diagnosis. When it comes to tumors of visceral organs of any kind, which are impossible to see, this is understandable, but when it comes to skin tumors, which are clearly seen, the delayed diagnosis is the result, above all, due to lack of information and ignorance (8-14). In our patients the fear of surgery, as a characteristic of late diagnosis, was not the reason for the statistical difference between the two groups. Specifically, in both groups the number of such patients was small and very similar. The belief of the laity that "moles should not be touched" is certainly one of the frequent prejudices when it comes to skin tumors. Moles for sure should not irritate, but it is necessary to control them and eliminate, where the slightest doubt exists (3, 4, 5, 6).

By this characteristic was found high statistical difference between patients in group A and group B. It has been shown that most patients with late diagnosis of melanoma area against to treatment of pigmented lesions on the skin. Prejudice, that "skin changes should not be touched," because "something can go wrong", if the pigment changes are examined or removed, has been the main reason for delayed diagnosis in group A. This prejudice is not unique only to the laity. To one of the patients from group A was removed melanoma located on the forehead. The same respondent was previously seen family doctor, but the competent specialist advised that this change should not be removed on the grounds that it was dangerous and that surgery could jeopardize his condition. Today we know that the child born with large or gigantic nevus have a greater risk of developing melanoma in such skin change (2, 3, 4, 5, 6, 7). The fact that changes in the skin are congenital is not a guard of possible evolution in malignant tumor (4, 5, 6).

In our study, there was a statistically significant dif-

ference in terms of prejudice that for changes on the skin since birth are not good to be surgically removed, or that the congenital changes of the skin are safe. It turned out that the patients in group A are far more susceptible to this prejudice because it is a case of pigment changes. On the contrary, all patients from group B patients, attributed far less attention to skin changes, because they were not pigmented, so that also in this characteristic is observed a statistically significant difference between group A and group B.

6. CONCLUSIONS

The largest number of respondents to the dermoscopic examination and possible surgery of skin cancers reported independently and directly, rather than on the advice of doctors. There was no statistically significant difference in terms of reasons why patients came to the examination of changes in the skin and eventual surgery. The most common reason for not coming to the examination is the belief of the respondents that "changes in the skin should not be touched," especially if they are congenital, because it is dangerous. The prejudice that skin changes "should not be touched," is common in patients with pigmented skin changes. In this group it is also very common one more prejudice that congenital pigment changes are safe because they are present from birth. Patients with BCC and PCC reported to the examination and surgery significantly later than patients suffering from melanoma, because the skin changes are no longer considered dangerous.

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