Geographical variations in the incidence of palpebral lesions

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Abstract

Aim: Understanding of the epidemiology of palpebral tumors is of paramount importance for ophthalmologists and other health professionals, as well as decision-makers and policymakers involved with health care planning and policy formulation. The aim of this study was to describe the palpebral lesions with regard to their geographical and ethnic variations, as well as differences in the incidence rates in various countries of the world.
Methods: Data about palpebral lesions for the current report were collected from the Ophthalmology Service of the University Hospital Center "Mother Theresa" in Tirana, in addition to a wide array of international scientific articles. In particular, the current report describes differences in the incidence rates and the geographical and ethnic variations of palpebral lesions in different parts of the world.
Results: There are significant differences in the incidence rates of palpebral tumors between various countries in the world which are presumably related to variations in skin types, geographical latitudes, health behavior including sun exposure, disease awareness among the general population and the surveillance systems for these diseases. Regardless of the geographical variations, the incidence of malignant palpebral tumors is increasing in many countries of the world.
Conclusion: Given the fact that palpebral lesions constitute an important share of the overall skin lesions, early diagnosis of these pathologies is of paramount importance. From this point of view, a prompt and accurate assessment of the clinical characteristics of palpebral lesions can inform early treatment which is a basic prerequisite for a favorable prognosis of these conditions.

Keywords: benign tumors, malignant tumors, ophthalmology, palpebral lesions, skin lesions.

Introduction

In general, both benign and malignant skin tumors are fully curable if diagnosed on time. However, these tumors constitute a major medical and public health problem worldwide given the fact that they are frequently diagnosed at a later stage where the treatment outcome and prognosis is not very favorable (1-4).

The international scientific literature suggests that about 5%-10% of all skin cancers involve eyelid (5,6). This is worrying considering the fact that the incidence of skin cancer is rapidly increasing (7-10). This situation is also similar in Albania, notwithstanding the lack of well-documented reports and scientific evidence.

From this perspective, the understanding of the epidemiology of palpebral tumors is of paramount importance for ophthalmologists and other health professionals, as well as decision-makers and policymakers involved with health care planning and policy formulation.

According to the data available from the Ophthalmology Service of the University Hospital Center "Mother Theresa" in Tirana, but also the recent international scientific literature, palpebral tumors constitute an important share of the overall malignant tumors of the face (1-4,11). Nevertheless, there is a wide range of palpebral lesion proportions reported by different studies conducted in various countries in the world (12,13). Hence, there is an almost fourfold difference in the international reports pertinent to the proportion of palpebral lesions (12,13) and these differences can be explained by different clinical characteristics of the patients included in different studies worldwide (14,15). Furthermore, the location of the tumors may be different in various studies reported in the international scientific literature (14,15). In any case, malignant palpebral lesions prevail among all types of skin tumors.

The aim of this report was to describe the palpebral lesions with regard to their geographical and ethnic variations, as well as differences in the incidence rates in various countries of the world.

Palpebral lesions in different countries and ethnic groups

Many Population-based studies of malignant palpebral tumors have been conducted in Western (industrialized) countries and also in Asian countries (16-23). According to these studies conducted to date, there are differences in the clinical and epidemiological features of palpebral tumors (16-23). Even among Chinese populations residing in different areas there have been reported differences in the clinical and epidemiological patterns of palpebral tumors (7,16,17).

The differences in the incidence rates of palpebral tumors between different countries in the world have been related to variations in skin types, geographical latitudes, health behavior including sun exposure, disease awareness among the general population and the surveillance system for such diseases (5,7).

According to a recent study conducted in Hong Kong, the age-standardized incidence of malignant palpebral tumors was reported to be lower than the same rate from several other countries including Taiwan, Singapore, and the United States (5). The authors of this report concluded that the lower incidence observed in their study suggest that malignant palpebral tumors may be a less significant health issue in Hong Kong compared with other parts of the world (5).

Incidence of palpebral tumors in different countries

Regardless of the afore-mentioned geographical variations, it should be noted that the incidence of malignant palpebral tumors is increasing in many countries of the world (7,21,23). This increasing incidence was also evidenced in a recent study from Hong Kong, where there was reported a rise from 0.6 per million in 1997 to 2.3 per million in 2009 (5). It has been suggested that the increase in the incidence of palpebral tumors is related to the

increasing frequency of outdoor activities, the unabated trend of population aging, and an increased awareness of skin cancer among physicians and the general population, which leads to an increased detection rate (5). In addition, the increase in the incidence of palpebral tumors has been also attributed to the improvement of diagnostic techniques and better reporting systems of these diseases (5). Furthermore, the ozone loss in the past few decades may have played an important role leading to an increase in ultraviolet radiation. From this point of view, it has been reported that for every 1% loss of thickness of the ozone layer, the annual incidence of basal cell carcinoma is expected to increase by 3% (5,24).

In any case, findings related to the incidence rates should be interpreted with extreme caution considering the fact that the standard populations used to calculate incidence rates of palpebral tumors vary among different studies (5). From this point of view, several studies have employed the WHO World Standard Population 2000 (5), whereas other studies have used different population groups or have reported only the crude incidence rate which is difficult to compare (5). Therefore, the incidence rates reported in different studies may not be readily comparable. In addition, as pointed out, comparisons of age-standardized rates among different studies can be made only if the computed rates are based on the same World Standard Population (5).

Palpebral tumors in Albania

A recent report from Albania informed about a case-series study which was carried out during 2011-2014 including 1200 patients (674 men and 526 women; mean age: 53±9 years) with ophthalmological disorders visited at the Ophthalmology Service of the University Hospital Center "Mother Theresa" in Tirana, the capital city of Albania (11).

According to this report, 156 (13%) patients were diagnosed with palpebral malignant tumors, compared with 1044 (87%) patients with other ophthalmological disorders. Of 156 patients diagnosed with palpebral malignant tumors, 110 (70.5%) of them had basal cell carcinoma, 23 (14.7%) had squamous cell carcinoma, 15 (9.6%) had adipose gland palpebral carcinoma, whereas 8 (5.1%) patients had other types of malignant tumors (11).

This was probably the first such study conducted in Albania which obtained evidence of basal cell carcinoma as the most frequent type of palpebral malignant tumor, followed by squamous cell carcinoma and next by adipose gland palpebral carcinoma.

Conclusion

Given the fact that palpebral lesions constitute an important share of the overall skin lesions, early diagnosis of these pathologies is of paramount importance. From this point of view, a prompt and accurate assessment of the clinical characteristics of palpebral lesions can inform early treatment which is a basic prerequisite for a favorable prognosis of these conditions.

Conflicts of interest: None declared.

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