eScientific Library

Volume 1 Issue 5
www.escientificlibrary.com

ES Journal of Case Reports

Risk Factors for Malignant Melanoma in Romania

Case Report

Monica Deac L*

University Babes-Bolyai, Cluj-Napoca, Romania

Received: Sept 12, 2020; **Accepted:** Sept 16, 2020; **Published:** Sept 18, 2020

***Corresponding author:** Liana Monica Deac, University Babes-Bolyai, Cluj-Napoca, Romania

Abstract

In all ages of population in the recent decades, Malignant melanoma is the most dangerous type of skin cancer in the whole world. Its incidence has increased worldwide and that for and earlier diagnosis programs, who reduce the morbidity and mortality of the malignant disease. The Parisian physician Rene Laennac's was the first who reported 200 years ago, the presence of melanoma in Europe

A retrospective epidemiologic study was conducted between 2017-2019 at 250 persons from Transylvania -ROMANIA, 138 Female, 112 Men, on 18-70 age, with malignant melanoma, to identify the most important risk factors for these illness. Malignant melanoma was most common in people over 40, although it affected children, young and middle-aged people as well, but the average age at diagnosis was 57 years of age and it was observed almost on trunks 41% at female and 29% at male. Fair skin and red hair symbolize our most appeared cases followed by blond hair and blue eyes, as well some family aspects too. UV and environmental or working exposure were established to cause.

Clinically, any suspicious skin lesion should be checked immediately, especially if it has grown quickly or is partially raised.

Introduction

Malignant melanoma is the most dangerous type of skin cancer in the whole world and its incidence has increased in all ages of population in the recent decades. For every 100,000 people in the United States, 17.7 new cases of melanoma are diagnosed each year.

In Romania, the incidence for the disease has increased in the last 2 years to 2, 4% per 100,000. Therefore, it is necessary to develop more effective public health and earlier diagnosis programs, who can reduce the morbidity and mortality of malignant melanoma. It has been almost 200 years since Parisian physician Rene Laennac's first report of melanoma in Europe. Melanoma is a malignant tumor of pigment cells, called melanocytes which are found predominantly in skin but also in the bowel and the eye and it is due to uncontrolled growth of these and accounts for 75 percent of all deaths associated with skin cancer (Figure 1).

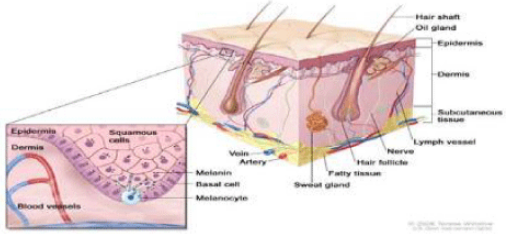

Figure 1: Normal and melanoma skin aspect.

Methods

A retrospective epidemiologic study was conducted between 2017-2019 at 250 persons from Transylvania-RO, 138 Female, 112 Men, on 18-70 age, with malignant melanoma, to identify the most important risk factors for the illness. Subjects, 195 from Urban and 55 from Rural, were interviewed face-to-face in their ambient place. The roles of constitutional and genetically factors and benign nevi in causation of malignant melanoma were also examined. Histological aspect identified malignant melanoma were under our observations (Figure 2).

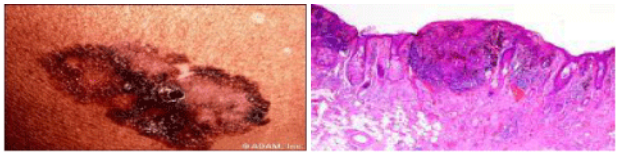

Figure 2: Histological images.

It were observed all possible signs of malignant melanoma with appeared change in a mole or pigmented area and the change was in size, shape, height, or color analyzed. In some cases, there were figured out, irregular edge or border, itching, or bleeding. Asymmetry (two sides of a mole looking or shaped differently) or new moles growing near an existing mole were considered other interpretable signs in these study.

Results

Data contain epidemiological and clinical determined observations.

Malignant melanoma was most common in people over 40, although it affected children, young and middle-aged people as well, but the average age at diagnosis was 57 years of age. Incidence rates were especially high at among people ages 65, and older, group who made up 35% of melanoma cases. In ages younger than 45, female had higher incidence rates than male. Female and malehave had similar rates in the age group of 45–54, but beginning at age 55, the incidence rates for male were greater than those for women (Figure 3). Commune locations for malignant melanoma were different at female and male, even if the trunk was represented at both more evident, 41% at female and 29% at male. On legs both have had evident incidence as female 29% and male 20%. All other presences were determined as representative for each of them (Figure 4).

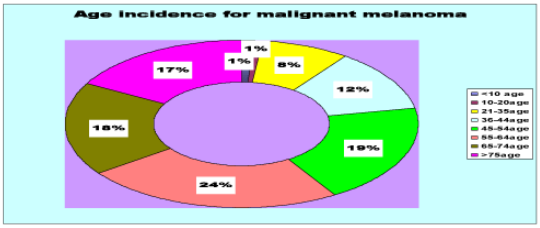

Figure 3: Incidence of Malignant Melanoma.

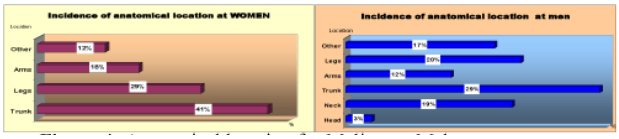

Figure 4: Anatomical location for Malignant Melanoma.

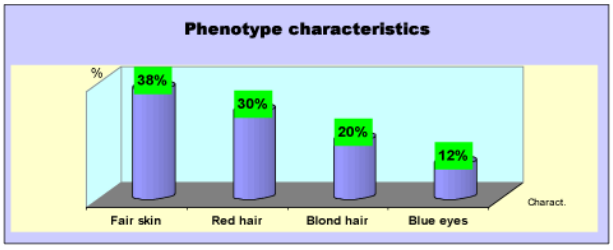

Figure 5: Our phenotype characteristics.

It was observed also some risks, who let appear Malignant Melanoma in our population, as: phenotype and so most founded characteristics were: : fair skin; red hair; blond hair; blue eyes in several representative %. Fair skin and red hair symbolize our most appeared cases followed by blond hair and blue eyes too (Figure 5).

Also, people with a prior history of dysplasia nevi (non-cancerous moles) and a family history of malignant melanoma have had 50% bigger risk for developing the disease. The presence of Malignant melanoma in their family was established in the study, as risk factor and was at 61% (Figure 6). High, intermittent exposure to solar

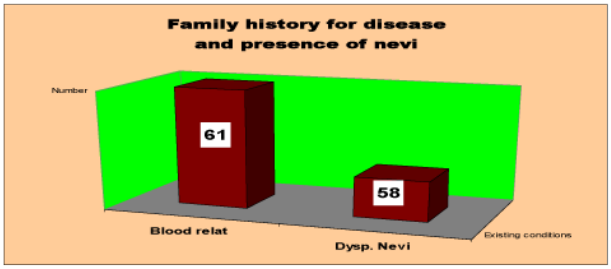

Figure 6: Other risk factors.

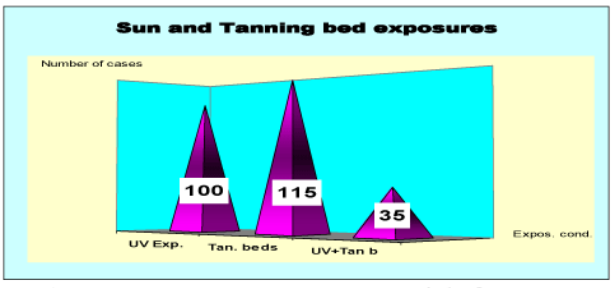

Figure 7: Exposure to UV as risk factor.

UV, was a significant risk factor for the development the malignant melanoma and UVB was considered to represent the most carcinogenic one. Sunburn doubled the risk for developing the disease and Tanning beds, exposure have increased that this skin cancer incidence with 75% more (Figure 7).

Occupational exposure to radiation and some chemicals (vinyl chloride, and petrochemicals) were associated with increased risk for the disease, in 74 cases. As more, people who worked or spend lots of leisure time outside, were at high increased risk too and the one who lived at higher elevations, as in mountain regional parts, were also at 2% bigger risk, because the atmosphere was thinner and does not filter UV rays as well (Figure 8). Data showed out that damaged life conditions with exposure to sunrises (UV, sunburn, tanning beds use, and life in mountain region)

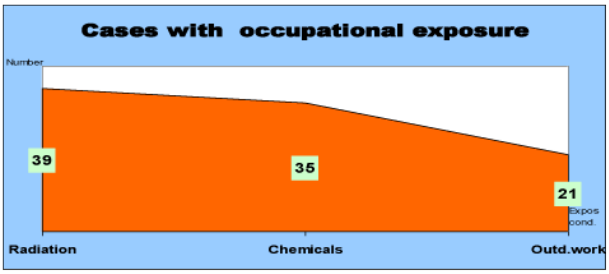

Figure 8: Occupational risks.

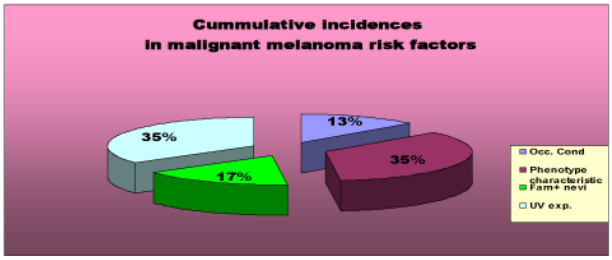

Figure 9: Analyze of cumulative incidences.

phenotype were with higher incidence for malignant melanoma cases, 35% (Figure 9). Because of the risk for malignant melanoma even in children age, the CDC recommends to prevent the disease, with this guidelines for schools:

- Policies that reduce UV exposure ;
- Environmental changes that promote exposure to the sun ;
- Educational tools to prevent cancer ;
- Familial commitment to improve prevention tactics ;
- Professional training programs for teachers and school administrators ;
- School health services to support prevent measures;
- Evaluation of policy implementation

Conclusions

Epidemiological data strongly implicate sunlight as one of principal environmental cause for malignant melanoma cases. Exposure to high levels of sunlight and the sunburns, or tanning beds use, and life in mountain region, double the risk of developing the disease. Other risk value, as phenotype and individual characteristics (disease present in family, nevi, skin, eyes, or hair colors) were also on high incidence. Today some protective measures can have a major role, to decrease the morbidity for malignant melanoma, all being effective public health recommendations, as:

- wearing of protective clothing who can block out UV rays as well adaptation of certain life-style changes too;

- use of sunscreens or sun-block (that block out both UVA and UVB radiation) is well recommended;

- for anyone over the age 1, sunglasses should be worn to block all UV rays when in the sun.

Clinically, any suspicious skin lesion should be checked immediately, especially if it has grown quickly or is partially raised.

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