Non-melanocytic skin tumors are the most common type of cancer, with increasing incidence and morbidity rates and around the world. Materials and methods: We performed a 5-year retrospective study regarding non-melanocytic skin cancer types - basal cell carcinoma, squamous cell carcinoma and metatypical carcinoma, that included 259 patients hospitalized in St. Spiridon Emergency Clinical Hospital’s Dermatology-Venereology Clinic, during 2013-2018, meaning 2.77% of all admitted patients. Results: This article describes the most common types of non-melanocytic skin cancer in our area: BCC was diagnosed in 87% of the patients, SCC in 12% and metatypical cancer in 1%. Our findings are in accordance with data reports over the last few years.

Keywords: non-melanocytic skin tumors, basal cell carcinoma, squamous cell carcinoma

Non-melanocytic skin tumors (NMSC) are the most common cancer type among the Caucasian population. Of all malignant tumors, skin cancer accounts for approximately 20% of new cases, these percentages being much higher in areas where there are several external carcinogenetic factors (such as solar radiation) [1]. Approximately 75-80% of NMSC are basal cell carcinoma (CBC), while squamous cell carcinoma (CSC) accounts for up to 25% [2]. Skin carcinomas originate from cells that form the two different but interdependent layers of the skin (epidermis and dermis) and also skin appendages [3].

Studies have shown that Australia reported the highest incidence of skin cancers in the world and in UK. NMSC cases account for one third of all cancers [4,5]. In Romania, at the end of 2005, there were 354,572 patients diagnosed with malignant tumors, of which 10.8% developed skin cancer. Also, in Romania, the incidence of skin cancers varies from one geographic area to another [1]. Since the incidence of non-melanocytic skin tumors continues to rise, these conditions represent real health problems both in terms of patients’ quality of life and in terms of healthcare spending [2].

Non-melanocytic skin cancers are the most common malignancies, with an increasing incidence throughout the world. Educating population on risk factors, as well as early detection and treatment of skin cancers and precancerous lesions, are key elements in managing these pathologies, providing high healing rates [3]. The two major types of skin cancer, basal cell carcinoma and squamous cell carcinoma, have shown dramatic increases in incidence in recent decades in the US [6]. Australia had the highest incidence of this condition, about 1170/100,000 cases [3]. In Romania, skin cancers accounted for 10.8% of all cases of neoplasia, according to a study carried out in 2005 [7].

Perera et al. demonstrated in a study conducted in 2015 that the incidence of NMSC in Australia is higher among males rather than females [5]. Recent data from Romanian literature highlighted the female prevalence of non-melanocytic skin tumors among the male population [3,8]. However, in our study the ratio women / men was 1.04. Regarding the hometown of the studied patients was considered, the rural area is more frequent, the data obtained being in accordance with data reports.

Most patients have occupations that require long-term exposure to solar radiation, the major etiological factor of NMSC [3].

Experimental part

Materials and methods

We conducted a retrospective, observational study. There were 259 patients included in the study, all diagnosed with non-melanocytic skin cancer, admitted in St. Spiridon Emergency Clinical Hospital’s Dermatology-Venereology Clinic during 2013-2018. Out of all patients admitted in this period of time, NMSC accounted for only 2.77%.

For each and every case included in our study group, we noted the following data: sex, age, hometown, tumor location, anatomo-pathological diagnosis. Patients were divided into 3 groups: 226 patients with basal cell carcinoma, 30 patients with squamous cell carcinoma and 3 patients with metatypical (basosquamous) carcinoma. For basal cell carcinoma, tumor location and histopathological type were assessed and for squamous cell carcinoma, the degree of differentiation and clinical type were analyzed.

Results and discussions

During 2013-2018, 259 patients with skin cancer were admitted to the hospital, 51% females and 49% males, with a 1.04 female/male ratio. Most patients lived in rural areas.

Non-melanocytic skin carcinomas were most frequent in patients aged 71-80 years (35%) and between 61-70 years (28%) (fig.1). The average age of cancer development was 71.9 years.

In the group of patients included in our study, basal cell carcinoma was the most common with 87%, followed by squamous cell carcinoma with 12%, and metatypical carcinoma only in 1% of cases. The major localizations for the development of basal cell carcinoma lesions were: nasal pyramid - 28%, genian region - 18%, and auricular region - 13%. Other areas had small lesion percentage, ranging from 12% to 1%; temporal, parietal, frontal, lateral cervical, oral and scalp regions (fig. 2).

In our cases of basal cell carcinomas, we met all clinical and histological types described in literature: pearly (30%), nodular (25%), ulcerated (39%), vegetant...
Squamous cell carcinoma accounted for 12% of all patients, the most common being: ulcero-vegetant (63%) and keratotic (30%). Depending on the degree of differentiation, well differentiated squamous cell carcinomas were present in 27%, moderately differentiated forms 60%, poorly differentiated 10%, and undifferentiated in only 3% (table 2).

Table 1
CLINICAL AND HISTOLOGICAL TYPES OF BASAL CELL CARCINOMA

<table>
<thead>
<tr>
<th>Clinical and histological types of basal cell carcinoma</th>
<th>Percentage (number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearly cysticarial</td>
<td>30% (68)</td>
</tr>
<tr>
<td>Nodular</td>
<td>25% (56)</td>
</tr>
<tr>
<td>Ulcerated</td>
<td>39% (89)</td>
</tr>
<tr>
<td>Vegetant</td>
<td>1% (3)</td>
</tr>
<tr>
<td>Terebrant</td>
<td>1% (1)</td>
</tr>
<tr>
<td>Pagetoid</td>
<td>2% (5)</td>
</tr>
<tr>
<td>Sclerodermiform</td>
<td>2% (4)</td>
</tr>
</tbody>
</table>

Table 2
CLINICAL AND HISTOPATHOLOGICAL TYPES OF SQUAMOUS CELL CARCINOma

<table>
<thead>
<tr>
<th>Histopathological types of SCC</th>
<th>Clinical types of SCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well differentiated</td>
<td>Ulcero-vegetant</td>
</tr>
<tr>
<td>Moderately differentiated</td>
<td>Nodular</td>
</tr>
<tr>
<td>Poorly differentiated</td>
<td>Venecuous</td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>Keratotic</td>
</tr>
</tbody>
</table>

Squamous cell carcinoma accounted for 12% of all patients, the most common being: ulcero-vegetant (63%) and keratotic (30%). Depending on the degree of differentiation, well differentiated squamous cell carcinomas were present in 27%, moderately differentiated forms 60%, poorly differentiated 10%, and undifferentiated in only 3% (table 2).

After analyzing the age distribution of non-melanocytic skin tumors, it was observed that these occur in individuals between the 2nd and the 8th decade of life. The number of patients with skin carcinomas increased with age. Thus, only 3 cases were identified in patients aged < 40 years, while the 71-80 age group had the most recorded cases [6]. In our group, the average age of NMSC was 71.9 years. The 61-70 age group had the second most frequent occurrence of the disease, with a total of 72 patients. These data are consistent with those obtained by Pântu M. et al. in a study conducted in 2014 on a group of 176 patients admitted during 2012 in the Plastic Surgery Clinic of the Emergency Hospital of Piteşti, Romania. People aged over 60 have a higher susceptibility to developing skin cancers, unlike individuals in other decades of age [1].

Basal cell carcinoma was the most common type of non-melanocytic skin cancer (87%) encountered in the patients included in the study. Although this type has a good prognosis and is not considered an aggressive cancer, the local destructive potential may require some complicated treatment methods.

Most authors have estimated that the most common localization of skin carcinomas is the nasal pyramid (25-30%), followed by other regions of the face, scalp and throat [9]. In our study, the nasal pyramid ranked first (28%), followed by the genian region (18%) and the auricular region (13%). We should underline the significant percentage of BCC development on the nasal pyramid, the occurrence of tumor lesions at this level being mainly due to the fact that the nose is the most prominent end of the human body and therefore is most exposed to sunlight, an etiopathogenic factor known in the pathology of cutaneous tumors [1].
As for the clinical forms of BCC, we observed the presence in the study group of all clinical types described in literature, the most common type being ulcerated (39%), followed by pearly cicatrical (30%) and nodular (25%). A study conducted between 2008-2012, which included 1,231 patients with cutaneous cancers from the Department of Surgery of St. Spiridon Hospital, Iasi showed the prevalence of basal cell carcinoma (54.9%), but unlike the results of our study, the nodular form was ranked first (40.4%) [8,9,13]. Another significant study in America, which focused primarily on BCC assessment, revealed that the most common clinical form encountered in patients enrolled in the study was nodular (57.6%). Similarly, the histopathological polymorphism of this type of carcinoma was observed, as evidenced in the literature [10-12,14].

Squamous cell carcinoma is a malignant tumor affecting keratinocytes, which usually develops on preneoplastic lesions and according to etiology and differentiation has various aggressive behaviors. The patients in the study who presented SCC represented only 12%. Of these cases, the most common histopathological forms were moderately differentiated (60%), followed by well-differentiated (27%), and the most common clinical forms were ulcerovegetative with 63%. Our findings are supported by a study conducted by the Oral and Maxillofacial Surgery Clinic between 2006-2010, which included 308 patients with facial skin carcinomas. The results of this study showed that the squamous cell carcinoma was also less common, the most common clinical types in this group of patients being: ulcerovegetant (50%), nodular (17.85%) and verrucous (17%). Another crucial element in the prognosis and evolution of SCC is the degree of differentiation. In this study also predominated moderately differentiated SCC (42.85%), followed by well-differentiated (32.14%) [3].

A particular attention should be paid to basal-squamous or metatypical carcinoma, which accounted for 1% of the cases in our study and which has long been the subject of many controversy. Confusion results from its histopathological appearance, with the presence of common features of both basal and squamous cell types in the same lesion, hence the unpredictable character of prognosis and tumor behavior [3].

Conclusions

This retrospective study analyzed the prevalence of NMSC and histopathological types of BCC and SCC in the Northeastern region of our country. The histopathological examination is indispensable for establishing a diagnosis of certainty due to the clinical polymorphism of these tumor. It was revealed that the most common type of NMSC was basal cell carcinoma, with 87% of cases, followed by squamous cell carcinoma, with 12% of cases. It is noted that the data provided by this study are similar to those in Romanian and international literature.

Future studies regarding the epidemiological data, as well as the main risk factors are needed in order to implement effective prevention and treatment methods.

References


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