PERSONAL RESEARCH OF THE PARANEOPLASTIC SYNDROMES ASSOCIATED TO THE BRONCHOPULMONARY CANCER

LIVIA MIRELA POPA

PhD Candidate "Lucian Blaga" University of Sibiu

Keywords: paraneoplastic manifestations, incidence, histological type

Abstract: Although the bronchopulmonary cancer incidence proves to be a severe cause of decay, in continual increasing, the paraneoplastic syndromes associated (numerous and extremely varied) are insufficient studied. The paraneoplastic syndromes that are best represented in our lot are the hematologic ones, 62 patients (40,78%) had at the moment of the maligne neoplasia diagnosis a certain form of hematologic paraneoplastic manifestation, the most frequent being the anemia in 42 patients (27,63%). Besides the hematologic syndromes our study distinguished paraneoplastic syndromes rarely observed: acanthosis nigricans present in one case, paraneoplastic trombophlebitis in two cases, nephrotic syndrome in one case.

Rezumat: Deși incidența cancerului bronhopulmonar arată că este o cauză severă de îmbolnăvire, și într-o continuă creștere, sindroamele paraneoplazice, asociate acesteia (nume de și variați, sunt insuficient studiate. Manifestările paraneoplazice, cele mai bine reprezentate, în cadrul lotului nostru, au fost cele hematologice, 62 de pacienți (40,78%) au avut, în momentul diagnosticului neoplaziei maligne, o anumită formă de manifestare paraneoplazică hematologică, cea mai frecventă fiind anemia (42 de pacienți-27,63%). Pe lângă sindroamele hematologice, am evidențiat și sindroame paraneoplazice mult mai rar întâlnite: acantosis nigricans într-un singur caz, tromboflebită paraneoplazică la două cazuri, sindrom nefrotic la un caz.

INTRODUCTION

Regarding the increasing of the bronchopulmonary cancer prevalence that represents the first cause of death in Europe and USA is possible the implicitly increasing of the paraneoplastic syndromes. In the specialty literature there are few substantial studies published, regarding these syndromes, in our country there is no broad study yet that distinguishes, at least their incidence in the patients with pulmonary neoplasia. The paraneoplastic syndromes may be several times the initial element for the patient that presents to the doctor or may be the first sign of recurrence in the patients diagnosed with bronchopulmonary neoplasm and treated for this affection. More, these syndromes may mimic the metastasis disease and if they aren’t detected, lead to the palliative treatment instead the curative treatment.

THE AIM OF THE STUDY

Is to determine the incidence of the paraneoplastic syndromes in patients diagnosed with bronchopulmonary cancer in our geographical area, at the moment of the diagnosis and also during the disease evolution.

We also proposed to study the characteristics of those paraneoplastic syndromes regarding the histological evolution type of the pulmonary neoplasia.

MATERIAL AND METHOD

We realised a prospective study with the patients diagnosed with bronchopulmonary neoplasia, with or without treatment and patients that present with paraneoplastic neoplasia symptoms and are diagnosed next with this affection.

The lot was selected from the patients admitted in the Clinics of Oncology, 1st Medical, II nd Medical, Neurology, Nephrology in the Clinical Emergency Hospital of Sibiu and patients diagnosed at the Pneumophysiology Hospital of Sibiu and assessed to the Oncology Clinic for speciality treatments. The data have been gathered from the observation papers, the anamnesis and objective examination of the patients.

The following examinations have been efectuated:

- The objective examination with the observation of the characteristic modifications of the paraneoplastic syndromes (hypoplastic fingers, hypertrophic osteoarthropathy, new moon face).
- Laboratory examinations:
  - Complete hemoleucogram, eritrocitary morphology in case of hemoleucogram modifications.
  - Na, K, Ca, Mg, P
  - Astrup
  - Seric alkaline phosphatasis, serum creatin-phosphokinasis, AST, ALT
  - CIC,C3, Ig A, M, G, cryoglobulinemia
  - Seric urea, serum creatinine, uric acid, proteinuria, routine urine examination, urinary sediment
  - Complete lipidogram
  - Determining the plasmatic cortisol and of the urinary 17 ceto-steroids
  - Bone radiography in case of bone pain or modifications of the osteoarticulary system

Corresponding Author: Livia Mirela Popa, 10, B-dul Corneliu Coposu street, block of flats .5 C, app., Sibiu, România; e-mail: liviamirelapopa@yahoo.com; tel +40-0723609030
Articol received on 17.02.2010 and accepted for publication on 24.09.2010
ACTA MEDICA TRANSILVANICA December 2010; 2(4)pagina pagina

AMT, vol II, nr. 4, 2010, pag. 240
1. Analysed and helped us to make the conclusions of the study.
2. A certain number of patients (3.94%) have been distinguished at 6 patients.
3. The neurological paraneoplastic manifestations have been observed at the present moment or in the past, they have a direct connection with smoking being smokers at the moment of the maligne neoplasia diagnosis.
4. In the case of 136 patients it has been established that they have a direct connection with smoking being smokers at the present moment or in the past, 16 weren’t smokers.
5. The media of the cigarettes smoked per day was of 20, during 20-30 years. Among the 152 patients in 118 patients the histopathological diagnosis was established as epidermoid carcinoma - in 52 patients (34.21%), small cells carcinoma – 29 patients (19.07%), adenocarcinoma -31 patients (20.39%), large cells carcinoma – patients (3.28%), pericytoma -1 patient (0.65%).
6. An important percent, 42.76% (65 patients) among them presented at the moment of the bronchopulmonary carcinoma diagnosis, a particular type of a paraneoplastic syndrome. There have been studied the main clinical and biological parameters characteristic for the paraneoplastic syndrome, the hemathological paraneoplasias occupying an important place, the anemia syndromes, normochromic, normocyte or hypochromic, microcytic being the most important numerically.

Table no. 1. The patients distribution on age groups

<table>
<thead>
<tr>
<th>The age category</th>
<th>35-39 years</th>
<th>40-49 years</th>
<th>50-59 years</th>
<th>60-69 years</th>
<th>70-79 years</th>
<th>80-89 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients</td>
<td>2 (1.31%)</td>
<td>10 (6.57%)</td>
<td>52 (34.21%)</td>
<td>44 (28.94%)</td>
<td>24 (15.78%)</td>
<td>2 (1.31%)</td>
</tr>
</tbody>
</table>

- Abdominal ecographies for evidentiating possible hepatic metastasis or a suprarenal tumour
- Electroencephalograms and electromiographies in patients with a neurologic symptomatology

The data have been centralized, processed and analysed and helped us to make the conclusions of the study.

RESULTS

1. In the case of 136 patients it has been established that they have a direct connection with smoking being smokers at the present moment or in the past, 16 weren’t smokers. The media of the cigarettes smoked per day was of 20, during 20-30 years. Among the 152 patients in 118 patients the histopathological diagnosis was established as epidermoid carcinoma - in 52 patients (34.21%), small cells carcinoma – 29 patients (19.07%), adenocarcinoma -31 patients (20.39%), large cells carcinoma – patients (3.28%), pericytoma -1 patient (0.65%).
2. An important percent, 42.76% (65 patients) among them presented at the moment of the bronchopulmonary carcinoma diagnosis, a particular type of a paraneoplastic syndrome. There have been studied the main clinical and biological parameters characteristic for the paraneoplastic syndrome, the hemathological paraneoplasias occupying an important place, the anemia syndromes, normochromic, normocyte or hypochromic, microcytic being the most important numerically.

Table no. 2. The numerical and percentage representation of the paraneoplastic modifications in the bronchopulmonary cancer

<table>
<thead>
<tr>
<th>Paraneoplastic modification</th>
<th>No.patients</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anemia Syndrome</td>
<td>42</td>
<td>27.63%</td>
</tr>
<tr>
<td>Erytrocitosis</td>
<td>5</td>
<td>3.28%</td>
</tr>
<tr>
<td>Thrombocytosis</td>
<td>20</td>
<td>13.15%</td>
</tr>
<tr>
<td>Granulocytosis</td>
<td>26</td>
<td>17.1%</td>
</tr>
<tr>
<td>Monocytosis</td>
<td>9</td>
<td>5.92%</td>
</tr>
</tbody>
</table>

3. The neurological paraneoplastic manifestations have been distinguished at 6 patients (3.94%).

CONCLUSIONS

1. The bronchopulmonary cancer remains the privilege of the masculine gender, with a report of 6,5/1.
2. Appears more frequently in smokers than in no-smokers with a report of 8/1.
3. The growing incidence in relatively young ages, the category the most affected being included between 50-59 years.
4. The epidermoid carcinoma dependent on the tobacco is the most frequent histopathological type (34.21%).
5. The growing incidence of the paraneoplastic syndromes at the moment of the maligne neoplasia diagnosis (42.76%).
6. The most frequent paraneoplastic syndrome was the one of a biological type represented by the anemic syndrome (42 patients -76.3%).
7. The paraneoplastic endocrine syndromes are the most frequent, the subclinical syndromes being predominant.
8. The most frequent endocrine syndrome is the hypercalcemia (10.52%).

BIBLIOGRAPHY