THE INFLUENCE OF THE MAJOR VASCULAR EVENTS PREVENTION TREATMENT ON THE CHRONOLOGY OF THE ANGINA PECTORIS, MYOCARDIAL INFARCTION AND CEREBROVASCULAR ACCIDENT


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Abstract
Studies have shown that cardiovascular events, such as angina pectoris, myocardial infarction and cerebrovascular accident are more common during the morning hours, with the second highest level in the evening, 1-11. Therefore, for example, the myocardial infarction can occur at any time of the day or night, but it is more frequent in the morning, in the first hours after waking up.

This circadian peak may be due to the combination of the increased sympathetic tone and the increased thrombosis tendency between 6:00-12:00 A.M.

Key words: cardiovascular accident, myocardial infarction, circadian peak, physiological parameters, prophylactic therapy.

INTRODUCTION

In patients following prevention therapy for these diseases, it is expected that the above-mentioned model change due to the variation of the physiological parameters, due to the medication and their lifestyle change.(Beamer et al 1987, Peters et al,1989,Kontopoulos et.al 1999,Burger et al 1999)
The few studies conducted so far, which followed the occurrence schedule of the major cardiovascular events, have highlighted a decrease in the morning onset peak of the major cardiovascular events. (Hjalmarson et.al 1989,Sturock et al1989,Eguchi et al2008,Kikuja et.al 2005).

Consequently, we have set out to study the time of occurrence of cardiovascular events, such as the myocardial infarction, the angina pectoris and the cerebral accident, in patients for whom pharmacological prevention methods were applied, in comparison to the patients who are not following a

Beta-blockers are drugs adrenoreceptonlor cheap, safe and effective for use alone or associated with diuretics or calcium antagonists, alpha-blockers in moderate forms of hypertension, use of beta-blockers alone can normalize presional amounts to about 40-60% of the patients (Elliot et al. 1998, Cohen et al. 1197, Pell et al. 1963, Pedoe et al. 1975, Thompson et al. 1985, Muller et al. 1985).

Along with diuretics, this class has proven its ability to reduce cardiovascular events. (Mattiolli et al. 1986, Wroe et al. 1992, Bhala et al. 2001)

MATERIAL AND METHODS

The study was conducted over a 2 year period (2013 – 2015); it included patients who came to the Arad Emergency Room, with symptoms suggesting angina pectoris, acute myocardial infarction or cerebro-vascular accident, later confirmed electrocardiographically, enzymatically or by a skull CT examination.

After the patients or their caregivers signed the consent to participated in the study, data was collected regarding the demographic features, the history of cardiovascular diseases for which they were admitted, the occurrence time of the cardiovascular event and the previously used drugs. The filtering criteria were the information inconsistency and the noncompliance with the previously administered treatments, including their irregular administering.

Subsequently, the patients were divided into two groups, based on the presence or lack of a prevention treatment for major vascular events.

Each group was further divided into three subgroups, depending on the type of vascular event: the first subgroup included the patients with angina pectoris (subgroup AP), the second included the patients with myocardial infarction (MI) and the third included the patients with cerebro-vascular accident (CVA). In order to have a significant statistical processing, the selection period ended only when each subgroup hat at least fifty participants.

RESULTS AND DISCUSSIONS

The group of patients being treated for cardiovascular diseases included a number of 156 patients (group P), and the group of patients who had no previous medication included 158 people (group NP).
Table 1

The composition of the study groups

<table>
<thead>
<tr>
<th></th>
<th>P Group N=156</th>
<th>NP Group N=158</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subgroup AP</td>
<td>50</td>
<td>51</td>
</tr>
<tr>
<td>Subgroup IM</td>
<td>51</td>
<td>50</td>
</tr>
<tr>
<td>Subgroup AVC</td>
<td>55</td>
<td>57</td>
</tr>
</tbody>
</table>

Table 2

Characteristics of patients included in the study

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>age</td>
<td>67,67</td>
<td>48,00</td>
<td>84,00</td>
<td>11,74</td>
</tr>
<tr>
<td>Troponin I</td>
<td>1.36</td>
<td>0.02</td>
<td>7.60</td>
<td>2.20</td>
</tr>
<tr>
<td>Total cholesterol mg/dl</td>
<td>201.98</td>
<td>114.00</td>
<td>384.00</td>
<td>61.99</td>
</tr>
<tr>
<td>HDL cholesterol, mg/dl</td>
<td>32.68</td>
<td>24.00</td>
<td>48.00</td>
<td>5.78</td>
</tr>
<tr>
<td>TG, mg/dl</td>
<td>173.80</td>
<td>52.00</td>
<td>666.00</td>
<td>118.4</td>
</tr>
<tr>
<td>C-reactive protein, mg/dl</td>
<td>1.72</td>
<td>0.043</td>
<td>13.91</td>
<td>2.53</td>
</tr>
</tbody>
</table>

Table 3

Area of origin of the patients in group NP, in the 3 subgroups

<table>
<thead>
<tr>
<th></th>
<th>Lotul NP</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area of origins</td>
<td>Subgroup - AP</td>
<td>Subgroup - IM</td>
<td>Subgroup - AVC</td>
</tr>
<tr>
<td>No. patients</td>
<td>town</td>
<td>31</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>%</td>
<td>60.78%</td>
<td>60.00%</td>
<td>61.40%</td>
<td></td>
</tr>
<tr>
<td>No. patients</td>
<td>country</td>
<td>20</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>%</td>
<td>39.22%</td>
<td>40.00%</td>
<td>38.60%</td>
<td></td>
</tr>
</tbody>
</table>

There were no significant differences in terms of age, in the two groups.

Thus, the patients from the P group had an average of 67,84 ±11,77 years, compared to the patients from the NP group, who averaged 67,50±11,74 years, p=0.79.

Table 3

Area of origin of the patients in group NP, in the 3 subgroups
CONCLUSIONS

The current data in the specialty literature, regarding the influence of major cardio or cerebrovascular event preventive drugs are few; currently, there are only two studies conducted on small groups of patients, that have reported the possibility of changing the chronobiology of the aforementioned manifestations.

The average age of the patients included in our study, who have exhibited major cardio or cerebrovascular events was 67,67± 11.74 years, with no significant variations between the two groups of patients.

The use of medication for preventive purposes of the major cardio or cerebrovascular events modifies their chronobiology.

Males have an increased risk of major vascular events, even when prophylactic methods are applied, possibly due to the tardy therapeutic intervention, in an advanced stage of the atherosclerosis process.

REFERENCES
