Correlation of syncopal burden with anxiety symptoms score in recurrent vasovagal syncope

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Vasovagal syncope (VVS) is the transitory loss of consciousness secondary to generalized cerebral hypoperfusion due to arterial hypotension with or without a concomitant reduction of heart rate [1]. Subjects suffering from recurrent VVS can have a high psychological stress including anxiety, depression, concern, and somatic complaints [2,3]. In previous studies, syncopal burden has been inversely correlated with quality of life but no significant correlation was observed between anxiety, depression and the patient’s syncopal burden [2,3]. The aim of this study was to correlate syncopal burden with symptoms score of anxiety and depression in subjects with VVS and no psychiatric disorders.

The study included 51 patients (27 females, median age 17 years, age range 15 to 45 years old) attending a syncope unit. All patients were evaluated by an expert physician. Diagnosis was established in the presence of a clinical history characteristic of VVS (simple fainting of very brief duration that occurs with the subject standing or at the moment of stand-up) with one or more of the following prodromal symptoms: dizziness, pallor, visual blurring, diaphoresis, dysesthesia, sighing dyspnea, tremor in fingers, or nausea [4,5]. All participants filled out the Beck Depression Inventory (BDI), the Beck Anxiety Inventory (BAI) and a cognitive function test [6-8]. Syncopal burden was classified as follows: low burden (≤3 events in the last 6 months), high syncopal burden (>3 events). No significant differences were observed in cognitive function and educational grade among subjects with high or low syncopal burden (data not shown). Exclusion criteria were: orthostatic hypotension, suspected or confirmed heart disease, other specific causes of neurally mediated syncope (situational or associated to coughing, swallowing or brisk neck movements), metabolic or neurological disorders, any concurrent disease or treatment that affects the autonomic nervous system, or known psychiatric disorder. All subjects gave informed written consent to participate. The study complies with the ethical guidelines of the 1975 Declaration of Helsinki, as well as the standards established by the Ethics Committee of the Instituto Nacional de Cardiología Ignacio Chavez. The authors of this manuscript have certified that they comply with the Principles of Ethical Publishing in the International Journal of Cardiology [9].

Results are shown in Table 1. In the total study group, anxiety symptoms were present in 17 patients (33%), and depression symptoms in 23 subjects (45%). Anxiety symptoms score was directly associated with the syncopal burden: patients with high syncopal burden had a higher anxiety score than subjects with low syncopal burden. No significant differences were observed in gender or depression symptoms score among subjects with high or low syncopal burden.

It is clinically relevant to correctly discriminate anxiety related to VVS from anxiety as a part of a psychopathology that will need, by itself, specific treatment. Subjects with a psychiatric disorder usually do not respond to conventional treatment of VVS, have a higher severity of syncope, more prodromal symptoms and higher recurrence of syncope than patients without a psychiatric illness [10]. On the other hand, subjects without psychopathology can develop anxiety related to recurrence of VVS. In them, anxiety may be the result, not the cause of VVS and could be solved by avoiding the recurrence of the events. Our finding of higher levels of anxiety, but not depression, in subjects with VVS and a higher syncopal burden is relevant for two reasons: (1) it supports the hypothesis of a bidirectional relationship between cognitive/affective factors and syncopal symptoms in subjects with VVS [11], and (2) because, as suggested by many investigators, the diagnosis and treatment of these minor psychiatric disorders may be crucial for the effective treatment of VVS. The subgroup of patients with a high syncopal burden could be the most benefited by early intervention aimed to acquire skills for functional coping with their distressing symptoms. Also relevant, the present finding could explain the reported benefit of clonazepam, a drug with anxiolytic effects, in subjects with VVS [12,13].

In conclusion, higher levels of anxiety were observed in subjects with a clinical diagnosis of VVS and a high recurrence of syncopal
episodes, supporting a bidirectional relationship between cognitive/affective factors and syncopal symptoms in VVS.

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Table 1

<table>
<thead>
<tr>
<th>Study population (n=51)</th>
<th>Syncopal burden</th>
<th>Low (n=33)</th>
<th>High (N=18)</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>17 (16–26)</td>
<td>16 (16–20)</td>
<td>21 (17–31)</td>
<td>0.026</td>
</tr>
<tr>
<td>Gender</td>
<td>27 (53%)</td>
<td>16 (49%)</td>
<td>11 (61%)</td>
<td>0.285</td>
</tr>
<tr>
<td>Anxiety symptoms Absent</td>
<td>34 (67%)</td>
<td>26 (79%)</td>
<td>8 (44%)</td>
<td>0.013</td>
</tr>
<tr>
<td>Anxiety symptoms Present</td>
<td>17 (33%)</td>
<td>7 (21%)</td>
<td>10 (56%)</td>
<td></td>
</tr>
<tr>
<td>Symptoms score</td>
<td>14 (7–22)</td>
<td>11 (4–19)</td>
<td>22 (12–27)</td>
<td>0.023</td>
</tr>
<tr>
<td>Depression symptoms Absent</td>
<td>28 (55%)</td>
<td>20 (61%)</td>
<td>8 (44%)</td>
<td>0.268</td>
</tr>
<tr>
<td>Depression symptoms Present</td>
<td>23 (45%)</td>
<td>13 (39%)</td>
<td>10 (56%)</td>
<td></td>
</tr>
<tr>
<td>Symptoms score</td>
<td>8 (4–14)</td>
<td>7 (4–12)</td>
<td>15 (7–22)</td>
<td>0.112</td>
</tr>
</tbody>
</table>

Results are shown as median (percentile 25 to percentile 75) or absolute frequency (percentage).

* Significant difference (p<0.05, Mann–Whitney U test or Chi-squared test), high versus low syncopal burden.

b This grade corresponds to normal scores in general population.

c This grade includes mild, moderate or severe symptoms according to cut-off values standardized for Mexican population [6,7].

References


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