TREATMENT OF PATIENTS WITH HYPERBARIC OXYGEN IN THE DEPARTMENT OF HYPERBARIC MEDICINE IN MBAL VARNA VMA

Yaneva M.1, D. Stavrev2, Hr. Bozov3

1Department of Hyperbaric medicine, VMA MBAL; 2Department of Anatomy, Histology and Embriology, 3Department of General and Operative Surgery, Anesthesiology and Intensive Care, Medical University “Prof. Paraskev Stoyanov” - Varna

Reviewed by: assoc. prof. V. Platikanov

SUMMARY

Slowly but surely, hyperbaric oxygenation is established as a method of treatment for many diseases. Aim of our work is to present the experience of the Department of Hyperbaric medicine at VMA MBAL Varna in the treatment of patients with Hyperbaric Oxygen. The study covers the period 1992-2011. A multiplace hyperbaric chamber at a pressure of 2 to 2.8 ATA 100% oxygen is used. It is analyzed distribution of patients passed through the department by years and nosological units. It is concluded that it has gained solid experience, which is a good basis for further development and expansion of indications for hyperbaric oxygenation.

Key words: hyperbaric oxigenation, hyperbaric chamber

INTRODUCTION

Slowly but surely, hyperbaric medicine is becoming an established treatment modality for a variety of medical disorders although used relatively recently, the fifties of the 20th century and primarily in the developed maritime countries. Globally, there is still no uniform indications for use. In the U.S., HBO therapy is used in 12 groups of diseases, this standard was prepared by the Association of hyperbaric and undersea medicine for the U.S. (UHMS). European medical society in the last 15 years actively engaged in identifying the site of hyperbaric medicine in clinical practice, led to a European code of quality practice in hyperbaric oxygenation /May 2004/.

PURPOSE

Our goal was to present our experience with HBO in various diseases.

MATERIALS AND METHODS

The study covers the period from 1992 to 2011. Methods applied in the study: analysis of literary sources, document-
other hand a growing number of physicians are interested and qualified in marine and diving medicine. It is not negli-

gible and that the decreased activity of gathering rapanas and related incidents.
The number of patients treated with intoxication is also a significant decrease for 2002-2004 year. Then the cases are

### Table 1

<table>
<thead>
<tr>
<th>years/ nosological units</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>surgery</td>
<td>6</td>
<td>33</td>
<td>58</td>
<td>43</td>
<td>43</td>
<td>40</td>
<td>46</td>
<td>37</td>
<td>25</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>internal diseases</td>
<td>1</td>
<td>21</td>
<td>23</td>
<td>21</td>
<td>30</td>
<td>17</td>
<td>53</td>
<td>52</td>
<td>34</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>traumatology</td>
<td>1</td>
<td>10</td>
<td>13</td>
<td>11</td>
<td>7</td>
<td>9</td>
<td>21</td>
<td>31</td>
<td>27</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>neurology</td>
<td>1</td>
<td>20</td>
<td>19</td>
<td>47</td>
<td>56</td>
<td>27</td>
<td>30</td>
<td>29</td>
<td>14</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>otorhino laryngology</td>
<td>2</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>42</td>
<td>37</td>
<td>54</td>
<td>40</td>
<td>43</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>diving diseases</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>12</td>
<td>30</td>
<td>6</td>
<td>10</td>
<td>8</td>
<td>23</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>toxicology</td>
<td>4</td>
<td>30</td>
<td>20</td>
<td>30</td>
<td>38</td>
<td>43</td>
<td>46</td>
<td>15</td>
<td>14</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>total</td>
<td>17</td>
<td>122</td>
<td>149</td>
<td>179</td>
<td>246</td>
<td>179</td>
<td>260</td>
<td>212</td>
<td>180</td>
<td>97</td>
<td>74</td>
</tr>
</tbody>
</table>

### Fig. 1. Passed through the department of hyperbaric medicine patients

### Fig. 3. Intoxications

### Fig. 2. Patients treated in the department of hyperbaric medicine for the period 1992-2011 distribution by nosological units

### Fig. 4. Diving diseases
increasing, but never reached the values of the first half of the period, but in recent years at levels 1/3 of those years from 1996 to 1998. Midst of intoxicating agents are: carbon monoxide, butane, carbon dioxide, acetone, chlorine, vinyl chloride, carbon tetrachloride, PHOS (BI-B8); ethyl alcohol, methyl alcohol, amanita faloides; drugs. The most significant proportion of them are carbon monoxide poisoning who are 99 or 28.7% of all intoxications. CO as a toxic agent is found both in industry and households. Source is the incomplete burning in combustion heaters, internal combustion engines, fires and other incidents.

**CONCLUSION**

During the twenty years period of its existence the Hyperbaric medicine department has gained a substantial experience with the HBO treatment of a lot of diseases. Our indications for HBO meet those of world leading authors in HBO. This experience is a solid base for further development and expanding indications of hyperbaric oxygenation.