DISARMING THE BLUEBOTTLE -
TREATMENT OF PHYSALIA ENVENOMATION

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Recent discussions of treatment with Chironex fleckeri (box-jellyfish) envenomation\(^1\) has cast doubt on current management of other jellyfish stings. The demonstrated discharge of Chironex nematocysts after application of methylated spirits\(^1\) has suggested that more harm than good may be done by well-intentioned treatment of jellyfish sting with methylated spirits. Vinegar and the product Stingose (Hamilton Laboratories Pty Ltd) have both been presented as treatments preferable to methylated spirits. This report describes an attempt to compare methylated spirits, vinegar and Stingose in the treatment of Physalia stings (Physalia physalis), also known as Portuguese Man-of-War and bluebottle.

METHOD

The forearms of 20 healthy, informed volunteers were divided into four quadrants as test sites. A 2cm to 3cm portion of live physalia tentacle was applied to each area, allowed to sting for two minutes and then treated with a different test substance in each quadrant. Salt water was used as a control and the treatment sites were rotated in different subjects. Subjective assessments of pain were made at treatment, five minutes and 15 minutes after treatment, and each subject noted the sites in order from most to least painful. The tentacles were left on the skin and kept wet with test solution. Skin reaction was also assessed at five minutes and 15 minutes. The test solutions were assigned a number and subjects and observers did not know which solution was applied to which quadrant.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Most Painful</th>
<th>Most Relief</th>
<th>Most Skin Reaction</th>
<th>Least Skin Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinegar</td>
<td>7</td>
<td>25</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Stingose</td>
<td>4</td>
<td>19</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>Methylated spirits</td>
<td>27</td>
<td>1</td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>Salt water</td>
<td>19</td>
<td>9</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Unsure</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>60</td>
<td>40</td>
<td>4</td>
</tr>
</tbody>
</table>

RESULTS

Table 1 is a summary of the assessments of pain and skin reaction. The item "unsure" in the treatment column is included because on some occasions there was no apparent difference between two or more treatments.

The results were analysed using Wilcoxon tests and regarding salt water as the control treatment. These showed that methylated spirits caused a significant increase in pain at the time of application \(P<0.01\). After five minutes, the relief from vinegar and Stingose was approaching significance \((0.05<P<0.1)\); after 15 minutes the reduction was significant \((P<0.05)\). Statistical comparison of the efficacy of vinegar and Stingose did not show any significant differences between them.

DISCUSSION

The most noteworthy conclusion from this study is that methylated spirits does not appear to have any advantages as a treatment of bluebottle stings. The immediate increase in pain is attributed to nematocyst discharge. It is legitimate to ask why methylated spirit has been accepted as treatment for so long. One possible explanation is that, on a beach, evaporative cooling after methylated spirit application may give some relief. This effect would not be present in our tests which were performed indoors. If this explanation is correct, then crushed ice may have some use as a remedy.

The more important question is what remedy should be used for first aid for bluebottle stings. On the basis of this trial it would appear that vinegar has a slight advantage over Stingose. In a serious case the role of local anaesthetic ointment has been emphasized.\(^3\)

ACKNOWLEDGEMENTS

We wish to thank the Director-General of Naval Health Services, Rear Admiral SJ Lloyd and the Department of Defence (Navy) for permission to publish this article. The assistance of Lieutenant Commander JW Rennie, who performed the statistical analysis, is gratefully acknowledged. We also wish to thank the beach inspectors and Able Seaman (Medical) M Boyle who organized specimen collections and, most importantly, the victims who consented to be stung.

REFERENCES


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