

## Treatment of jellyfish stings

John G Taylor

**TO THE EDITOR:** An experiment was recently conducted during a morning doctor's seminar at the Busselton Hospital to assess four treatments for jellyfish stings using specimens of *Carybdea* species collected from the nearby waters of Geographe Bay.

Two doctors and three medical students consented to participate. The tentacles of the jellyfish were dragged over the moistened forearm, producing two well separated stings on each forearm. After 5 minutes, there were visible red wheals developing at the sting sites. Four different treatment modalities were then tried, one at each sting location: ice, vinegar, aluminium sulfate, and hot water at about 45°C.

The participants were asked to assess the degree of pain relief given by the treatment, and the time taken to achieve that pain relief (Box). Hot water was the only successful treatment, relieving 88% of the pain; all participants obtained significant relief in 4–10 minutes. Other treatments were incomplete and temporary. Hot water was later used to treat the other stings.

It was also noted that the palpable wheals disappeared when hot water was used. This suggests that, in addition to relieving the

### Degree of pain relief for the five participants (1–5) after various treatments for jellyfish sting

| Treatment         | Pain relief during treatment |     |     |     |     |      | Continuing relief after treatment |     |     |     |     |      |
|-------------------|------------------------------|-----|-----|-----|-----|------|-----------------------------------|-----|-----|-----|-----|------|
|                   | 1                            | 2   | 3   | 4   | 5   | Mean | 1                                 | 2   | 3   | 4   | 5   | Mean |
| Ice               | 40%                          | 0   | 75% | 10% | 0   | 25%  | 0                                 | 0   | 0   | 10% | 0   | 2%   |
| Vinegar           | 30%                          | 0   | 20% | 0   | 0   | 10%  | 0                                 | 0   | 20% | 0   | 0   | 4%   |
| Aluminium sulfate | 75%                          | 20% | 30% | 35% | 50% | 42%  | 0                                 | 20% | 0   | 35% | 50% | 21%  |
| Hot water         | 90%                          | 95% | 90% | 80% | 85% | 88%  | 90%                               | 95% | 90% | 80% | 85% | 88%  |

0 means no relief of pain; 100% means complete relief of pain. The pain relief was temporary (pain returned when treatment stopped) for all except hot water and (to a lesser extent) aluminium sulfate. ♦

pain, the heat treatment was stopping the inflammatory reaction.

Heat has been advocated as a treatment for fish spine envenomations from various species, and early application of heat has been found to prevent long-term sequelae.<sup>1,2</sup>

I have previously reported my experiences with stings from the large tropical jellyfish *Tamoya gargantua*.<sup>3</sup> Application of heat led to the relief of pain over 10–15 minutes. Loten et al recently reported the use of hot water in treating bluebottle *Physalia physalia* stings, and suggested the mechanism was through heat inactivation of the jellyfish toxin.<sup>4</sup>

There is an urgent need for knowledge of this simple remedy to be spread, and there is

the potential that it could even be lifesaving when used with more serious jellyfish stings in the north of Australia.

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- 2 Taylor G. Toxic fish spine injury: lessons from 11 years experience. *SPUMS J* 2000; 30: 7-8.
- 3 Taylor G. Are some jellyfish toxins heat labile? *SPUMS J* 2000; 30: 74-75.
- 4 Loten C, Stokes B, Worsley D, et al. A randomised controlled trial of hot water (45°C) immersion versus ice packs for pain relief in bluebottle stings. *Med J Aust* 2006; 184: 329-333. □