Irukandji envenomation in far north Queensland

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It was pleasing to see further research into the severe systemic symptoms of the Irukandji syndrome.1 For 10 years, I have been gathering information on severe marine envenomation2 and my database has details of more than 600 Irukandji stings, with an analysis soon to be published. Also, with assistance from the Australian Rotary Health Research Fund, I am conducting further Irukandji research, together with Surf Life Saving Queensland (SLSQ) and Cairns lifeguards. However, as suggested by Little and Mulcahy, further dedicated funding is required for the development of an Irukandji antivenom. This is essential, as I estimate the current annual cost to the community of Irukandji envenomation in retrieval, treatment and incidentals to be some $1-3 million.

Our research grant provides funding in three areas:

First aid treatment: There is no current proven first aid treatment. Consequently, a randomised trial of the efficacy of the pressure immobilisation technique3 after vinegar use on Irukandji stings is under way. Pressure immobilisation has proved beneficial following Chironex envenomation 4 without worsening envenomation. Vinegar totally inhibits Irukandji nematocyst (stinging cell) discharge when poured on the sting site for 30 seconds it will prevent further envenomation. Consequently, concerns that this technique might trigger the firing of undischarged Irukandji nematocysts, increasing envenomation, appear unfounded. Pressure immobilisation may restrict venom movement, enabling local destruction of possibly heat-labile toxin, hopefully delaying and reducing the severity of the syndrome.

Cardiac complications: These may occur in early Irukandji envenomation (author's database). Lifeguards are monitoring cardiac rhythms of sting victims with early, possible Irukandji, envenomation. Rhythms other than "normal" are recorded for further assessment. These may show a correlation between early abnormal cardiac rhythms and later development of pulmonary oedema and toxic global cardiac dilatation, enabling early and possibly preventive measures.

Antivenom development: The jellyfish responsible are being captured using special small nets designed by Kim Moss of Uninet, which filter large volumes of seawater. Venom obtained from these specimens is then analysed by the Australian Venom Research Unit, hopefully assisting in the future development of specific Irukandji antivenom.

SLSQ welcomes further information about Irukandji stingings to be included in the database, and would be happy to assist researchers with current information, or to provide beach personnel necessary for such research.

References

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