An analysis of marine animal injuries presenting to emergency departments in Victoria, Australia [Abstract]
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Abstract

Objective: To describe the epidemiology of marine animal injury in Victoria, Australia, in order to identify risk factors and recommend prevention strategies.

Methods: Retrospective, descriptive study of patients with marine animal injuries who presented to Victorian emergency departments between October 1995 and June 2000. Data were obtained from the Victorian Emergency Minimum Dataset. The main outcome measures were the marine animal involved; the nature, time, and place of injury; and subject demographics and activity.

Results: Two hundred five injuries were identified, and males predominated (71.7%, P < 0.01). Injuries were most frequent during summer and when jellyfish were most prevalent. Various fish species, stingrays, jellyfish, and sharks were incriminated in 83 (40.5%), 46 (22.4%), 42 (20.5%), and 5 (2.4%) injuries, respectively. Most (65.9%) injuries occurred during leisure or sport, and 72 (35.1%) occurred in a place of recreation. Spikes, spines, and barbs caused 82 (40.0%) injuries, and stings caused 54 (26.3%) injuries. Bites were uncommon. Most injuries were to the limbs, with the hands or feet injured in 127 (62.0%) patients. Forty (19.5%) injuries were associated with a retained foreign body. Only 17 (8.3%) patients required admission to the hospital.

Conclusions: Marine animal injury is seasonal but rarely serious. Vigilance is required when handling fish, and protective gloves, footwear, and clothing are recommended where appropriate. Clinicians should consider retained foreign bodies in penetrating injuries. Warnings are recommended when jellyfish are most prevalent.

Features of glossopharyngeal breathing in breath-hold divers [Abstract]
Seccombe LM, Rogers PG, Mai N, Wong CK, Kritharides L, Jenkins OR

One technique employed by competitive breath-hold divers to increase diving depth is to hyperinflate the lungs with glossopharyngeal breathing (GPB). Our aim was to assess the relationship between measured volume and pressure changes due to GPB. Seven healthy male breath-hold divers, age 33 (8) [mean (SD)] years were recruited. Subjects performed baseline body plethysmography (TLC\textsubscript{PRE}). Plethysmography and mouth relaxation pressure were recorded immediately following a maximal GPB manoeuver at total lung capacity (TLC) (TLC\textsubscript{GPB}) and within 5 min after the final GPB manoeuver (TLC\textsubscript{POST}). Mean TLC increased from TLC\textsubscript{PRE} to TLC\textsubscript{GPB} by 1.95 (0.66) litres and vital capacity (VC) by 1.92 (0.56) litres (P < 0.0001), with no change in residual volume. There was an increase in TLC\textsubscript{POST} compared with TLC\textsubscript{PRE} of 0.16 (0.14) litres (P < 0.02). Mean mouth relaxation pressure at TLC\textsubscript{GPB} was 65 (19) cmH\textsubscript{2}O and was highly correlated with the percent increase in TLC (R = 0.96). Breath-hold divers achieve substantial increases in measured lung volumes using GPB primarily from increasing VC. Approximately one third of the additional air was accommodated by air compression.

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