

Infectious diseases associated with marine mammal rescue: clinical, microbiological features and risk reduction

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There are approximately 50 live strandings of whales, dolphins and porpoises (collectively known as cetaceans) and in the region of 800 seal casualties around the coast of Britain each year. Whilst a large number of these sea mammals are found to be suffering from severe disease or physical trauma when first discovered, a significant proportion appear to strand in good clinical condition. In the latter case, attempts to rescue individual animals and return them to the sea are often undertaken. In the absence of government advice and funding, however, these activities are presently co-ordinated by voluntary rescue organisations who recruit and train members of the public in marine mammal first aid procedures and specialised rescue techniques. Ensuring the health and safety of these volunteers is of course of paramount importance, particularly as the fate of rescued animals is at present unknown.

Aside from the fact that rescue attempts can be physically demanding for the rescuers – as strandings often occur during the harshest of weather conditions – many of the potential risks associated with marine mammals come from direct contact with the animal itself. Rescue attempts involving close and prolonged physical contact with a stranded animal have been known to last up to 48 hours. During this time, members of a rescue team may be required to protect the blowhole of a stranded cetacean – a task involving cupped hands being placed around the blowhole to prevent ingress of water, which may result in close exposure to mammalian respiratory secretions; force feed an animal via an orogastric tube; gently rock a large animal to ease pressure areas; and lift or carry smaller mammals. These manoeuvres undoubtedly result in exposure of the rescuer to skin and oral microbial and respiratory tract flora of the stranded animal.

Many of the infectious diseases that may be acquired from marine mammals are rarely encountered in humans and often have vague, non-specific clinical findings that develop slowly over a period of time. The causative organisms may not be culturable using routine diagnostic microbiological methods. Such infections can be associated with significant morbidity and may require prolonged treatment with antibiotics. The purpose of this review is to heighten awareness of the potential infectious diseases that might be acquired during exposure to marine mammals, to describe the clinical and microbiological features of these infections, and to suggest viable methods for risk reduction.