Deep Palmar Space Infection in the Mid-Atlantic – a Case Report

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The 2002 Challenge Transat was a Trans-Atlantic yacht race based on the Challenge Round the World race series.

Six 72-foot steel hull yachts raced across the Atlantic Ocean between Cowes, UK and Boston, USA.

Each yacht was crewed by a combination of professional and amateur crew. The author was a crewmember and medic on "BG Group"



Mid-Atlantic on BG Group

Roles on the yacht varied between foredeck crew, helms, snakepit (lines) operators and domestic duties

All these roles were demanding. Helming however required many hours holding the yacht's wheel during conditions with storm force winds

The index case was an experienced and key helm on BG Group. Helming was demanding in the open Atlantic with a rough sea state and winds up to storm force 10. He developed blisters on the palmar aspect of both hands, worse over the metacarpophalageal joints (MCPJ) of the left hand. He initially self managed the blisters, but then sought medical advice from the yacht's doctor. It was determined the blisters had become infected and he was started on oral antibiotics.



Unfortunately, antibiotics failed to control the infection, which worsened with increasing swelling over the MCPJs. This progressed with involvement of the entire palmar area, later with circumferential hand swelling. The yacht's doctor diagnosed a deep palmar space infection and sought advice from shore-based specialists. It was determined that urgent transfer for surgical debridement was indicated to avert serious local or systemic complications, including the possibility of irreversible hand dysfunction. The yacht was at this time several hundred miles offshore and evacuation was challenging. After consideration of tasking a lifeboat from the Scilly Islands, the UK Coastguard requested assistance from the Royal Navy (RN) Air-Sea Rescue Service at RNAS Culdrose. The casualty was evacuated by high-line transfer to an RN Sea-King helicopter and transferred to hospital where he underwent surgical debridement and made a full recovery.



Demanding helming mid-Atlantic

Acknowledgments

Photography credits: Jonathan Inglesfield

Thanks to Mike Del Brocco who was happy to be featured as the patient in this case study. It didn't put him off sailing!



Challenge 72 - BG Group

Deep Palmar Space Infection should be considered as a serious consequence of helming racing and cruising yachts, due to the risk of progressive trauma with secondary infection. Management of hand infections should include early oral or IV antibiotics, with evacuation considered should infections not resolve with antimicrobial treatment. The standard treatment of deep palmar space infection is surgical debridement.

It is likely the risk of progressive hand infection in yacht crews is under-recognized, and crews should be advised to report hand injuries of any kind, including simple blistering, to facilitate early intervention and reduce the risk of complicating serious hand infection.

Reference

Infections of Deep Hand and Wrist Compartments; Malinzos et al Microorganisms 2020 8(6) 838

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