



Introduction

Background

Necrotising fasciitis or myositis is a potentially fatal condition with mortality from 6%–80%. Although it is a surgical emergency it is often difficult to diagnose and delays in diagnosis are common. We describe an unusual case necrotising fasciitis and myositis of the deltoid muscle secondary to the self injection of tap water in an otherwise well young woman.

Methods

A retrospective review of this patient's clinical notes was carried out. We also performed a review of the literature surrounding necrotising fasciitis/myositis

Case

History

A 23 year old female presented with a three day history of pain and swelling of her left upper arm secondary to self injection of tap water. Three days prior to presentation she had held tap water in her mouth before drawing it up with a clean needle and syringe and injecting it into her left upper arm. She gave a past medical history of post traumatic stress disorder and previous admissions with self harm injuries.

Imaging and Lab Results

A plain film of her humerus on admission showed air locules in the deltoid muscle. Computerised tomography of the arm on day two of admission showed a large swollen left deltoid with extensive gas locules. C reactive protein was raised at 444mg/L on admission

Theatre

She was taken to theatre for emergency washout 18 hours post presentation and had two subsequent washout and debridement surgeries resulting in the loss of the posterior portion of her deltoid muscle.

Microbiology Results

Intra operative samples grew *streptococcus anginosus*, mixed anaerobes, *Actinomyces odontolyticis* and *Staphylococcus aureus*.

Antimicrobial Management

She was treated initially with clindamycin, vancomycin and tazocin. This was soon rationalised to tazocin then to po co-amoxiclav.

Other Management

The patient required pain team input for her initial severe postoperative pain and has ongoing engagement with physiotherapy as an outpatient due to her significant muscle loss.

Conclusion

Necrotising fasciitis/myositis is an uncommon but potentially fatal condition that may present to medical teams on call. Delays in diagnosis can result from the non-specific presentation of the illness. This case demonstrates an unusual manifestation of the disease, with microbiological samples reflecting oral flora, in keeping with water having been held in the patient's mouth prior to being injected.



Image 1; plain film x-ray of the left shoulder showing soft tissue swelling and multiple internal locules of gas.



Image 2; computerized tomography image of the left shoulder showing large swollen deltoid musculature with extensive gas locules.