Periocular Necrotising Fasciitis: a case series & the Introduction of the Necrotising Fasciitis MAnchester Protocol (Nec-Fasc-MAP)

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Introduction

- Necrotising fasciitis is a rare deleterious infection which spreads swiftly along soft tissue planes subcutaneously
- While the extremities, abdomen, and groin areas are more commonly involved, the periocular region involvement is exceedingly rare and can lead to significant morbidity and mortality

Method & Aims

- 1. A retrospective observational case series of 7 consecutive patients
    - Managed by the **Oculoplastic & Orbital Service** and **Maxillofacial Service of** Manchester University NHS Foundation Trust between 2018-2021
- 2. The introduction of the **Nec**rotising **Fasc**iitis **MA**nchester **P**rotocol to streamline the diagnosis and management of suspected necrotising fasciitis
- 5 males, 2 females
- Mean age: 51.7 (31-67)

Parameters studied

1. Periocular & ophthalmic findings

- Bilateral involvement was present in 1 patient
- Initial exam often showed **sloughing** of tissues and **periocular swelling and erythema**
- Systemically unwell
- **Abscess formation** in 3 patients

2. Risk factors

- Commonest is **trauma or injury** (5/7)
- Followed by **IV drug use** (3/6) and **alcohol excess** (3/6)
- 1 patient was **immunosuppressed** with prednisolone 30mg OD due to Granulomatosis with Polyangiitis and ANCA-PR+3 vasculitis. Had likely gastrointestinal infection on presentation

3. LRINEC score

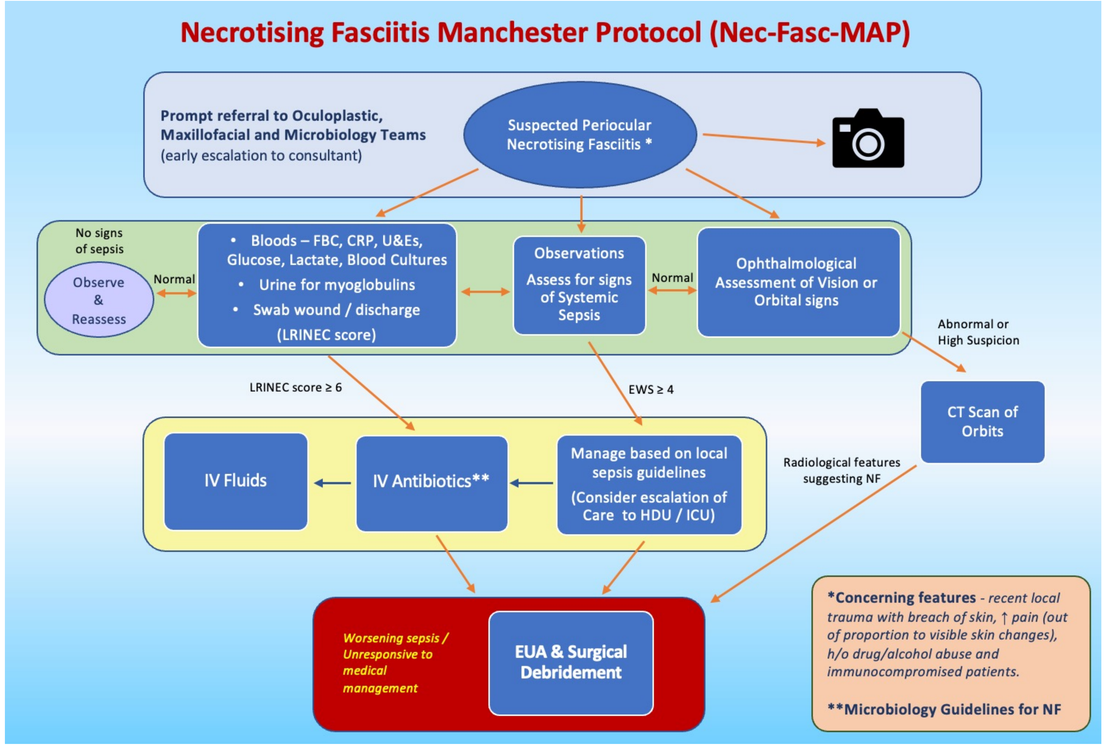
- Develoepd to distinguish necrotising fasciitis from severe cellulitis or abscess
- Patients with **LRINEC score >/= 6** should be carefully evaluated for the presence of necrotizing fasciitis
- 5 patients had LRINEC score calculated
- Our patients scores ranged from **4 to 8**

4. Haematological & biochemical results

- **Group A beta haemolytic Streptococcus** (5 patients), Staph. Epidermidis (1), Staph. aureus (2)
- Only 1 patient had a **positive blood culture**

5. Management and timing

- All had **IV broad-spectrum antibiotics** (coverage for strep, staph, anaerobes and enterobacteria)
    - E.g. Ceftriaxone/Gentamicin + metronidazole
- 5 patients required **ICU admission**
- All had **extensive debridement surgery within 24 hours**
- All had **multiple debridement surgeries** coordinated in a **MDT approach with Maxillofacial Service**
- All had **reconstruction surgeries** with 3 patients requiring **INTEGRA dermal substitute**



6. Final outcomes

- 1 suffered from a possible compressive optic neuropathy with a final visual acuity (VA) of 0.5 on logMAR
- **Final VA** in last follow-up ranged from **0.0 to 0.5 logMAR**

Conclusion

- The Nec-Fasc-MAP provides clear guidance as to what **investigations** and **assessments** are needed where there is a suspicion of necrotizing fasciitis
- Including **specific blood tests, urine sample, wound swabs and CT orbits**
- The use of **LRINEC and EWS scoring systems** in Nec-Fasc-MAP allows clinicians to diagnose necrotising fasciitis early and manage it in a timely manner