NECROTISING SOFT-TISSUE

The surgical emergency · cut, don't wait

TO THEATRE
now

MANAGEMENT PATHWAY

1. **Resuscitate (fluids)**
2. **Broad abx + clindamycin**
3. **URGENT surgery**
4. **Repeat debridement**
5. **Monitor & re-explore**
6. **Narrow on cultures**

SURGERY IS DIAGNOSIS + TREATMENT: urgent exploration & debridement - do NOT delay for imaging. Antibiotics + resuscitation are adjuncts.

RED FLAGS *necrotising*

Pain OUT OF PROPORTION · rapid spread · systemic toxicity / shock · bullae, dusky / necrotic skin · crepitus (gas) · 'dishwater' fluid · anaesthetic skin.

LRINEC score supports but does NOT exclude it - if you are thinking of it, call surgery.

EMPIRIC THERAPY

- **Broad-spectrum -** pip-tazo 4.5 g q6h OR meropenem 1 g q8h
- **+ Vancomycin -** MRSA (25-30 mg/kg load)
- **+ Clindamycin -** 900 mg q8h - suppresses toxin (Eagle)
- **Targeted -** GAS / Clostridium → penicillin + clindamycin

TYPES

TYPE 1 polymicrobial

diabetic, perineal (Fournier's), post-surgical - mixed aerobes + anaerobes

TYPE 2 Group A strep

young / previously healthy; may present with streptococcal toxic shock

TYPE 3 clostridial

gas gangrene; trauma, IV drug use - crepitus, rapid myonecrosis

MONITOR & SUPPORT

- Aggressive resuscitation - massive fluid / protein losses
- Repeat debridement at 24 h and until no necrosis
- Track CK, renal function, lactate; ICU organ support
- De-escalate on operative cultures once source controlled

STILL SPREADING / TOXIC?

- **More necrosis -** back to theatre - re-debride now
- **Toxic shock (GAS) -** consider IVIG; supportive ICU care
- **Missed extent -** image / explore adjacent compartments
- **Not necrotising? -** reconsider - but err on exploring

ADJUNCTS & AFTERCARE: IVIG for streptococcal toxic shock · clindamycin / linezolid to switch off toxin · planned re-look debridement every 24-48 h until clean · aggressive fluid + protein replacement · reconstruction once source controlled. Continue antibiotics until debridement is complete.

PEARLS & PITFALLS

- Pain out of proportion + systemic toxicity = necrotising infection until surgery proves otherwise.
- Add clindamycin - it switches off toxin production in streptococcal / clostridial disease.
- Never wait for imaging or a normal LRINEC - explore early; the operation makes the diagnosis.
- Plan to go back: repeat debridement until there is no more necrotic tissue.

References: IDSA Skin & Soft Tissue Infection 2014 · WSES Skin & Soft-tissue 2022 · Surviving Sepsis Campaign 2021.

Educational aid; verify doses against local protocol and patient factors.