



Necrotising Fasciitis

Sept 2014

GAS GANGRENE: (Myonecrosis) = MUSCLE involved, Gas in tissues

- 1) Clostridial Myonecrosis: more common
- 2) Non-Clostridial Myonecrosis (polymicrobial)
- 3) Streptococcal myositis: rare, no gas, high mortality (80-100%)

NECROTISING FASCIITIS: soft tissue/fascia only = NO MUSCLE

- 1) Polymicrobial Infection: more common, may get crepitus (gas) late sign
- 2) Grp A Strep Infection: NO crepitus (gas)

Epidemiology

IVDU, poor social circumstances; mortality 25-35% (40% in Fournier's gangrene)

Incr mortality: <1yr, >60yrs, IVDU, CRF, CCF, trunk / perineum, PVD, +ive blood culture (strong predictor), delay to treatment

Risk factors

For Fournier's gangrene: obesity, immunocomp, DM (in 20-70%), alcoholism (in 25-50%), steroid use

Pathophysiology

Burns: pseudomonas

Diabetes: staph aureus, bacteroides, enterobacter

Trauma: clostridium (C septicum / perfringens - most common cause of gangrene); in 10-40% nec fasc

Gangrene: clostridium, bacteroides, enterobacter, peptostreptococcus; Fournier's gangrene is mixed aerobic and anaerobic (anaerobic Strep, G-ive rods, anaerobes; B fragilis and E coli most common) necrotising subcutaneous infection - dermal gangrene and massive scrotal swelling

Gas in tissues: clostridium, bacteroides, peptostreptococcus, E coli, Strep pyogenes – infects SC tissues and muscle; usually requires poor vascular supply

Type 1: polymicrobial

Type 2: grp A strep +/- staph aureus; usually in younger patients due to trauma / surgery

Foul odour, regional adenopathy: bacteroides

Assessment

Pain / tachycardia out of proportion to physical findings; blanching, tense - dusky brown/red
- haemorrhagic bullae - crepitus (late; in 13-30%); presence of gas on XR not required to make diagnosis
CT 80% sensitive

Management

SURGERY

Empiric: Meropenem 1g TDS (use penicillin / cephazolin instead if Strep pyogenes) + clindamycin
- can use antitoxins if clostridium; debridement; HBO

In Fournier's gangrene: ceftriaxone 2g IV + metronidazole 500mg IV + gentamicin 5mg/kg