Necrotizing Fasciitis Diagnosis and Treatment



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Diagnosis/Workup

Usually a Clinical Diagnosis

Clinical-clip-board

In most cases, necrotizing fasciitis can be diagnosed on clinical suspicion based on physical exam findings such as crepitus, edema extending beyond the area of erythema, and extreme pain or Anesthesia in late-presenters. Technically, suspicion of necrotizing fasciitis is only officially confirmed when infected and devitalized tissue is visualized during surgical debridement.

Soft Tissue Gas On CT

Cat releasing gas

In cases where there may be some doubt as to the presence of necrotizing fasciitis, gas being present in soft tissues on CT can help confirm your suspicion. This is most commonly seen in polymicrobial or clostridial necrotizing fasciitis, and is a highly specific finding that should prompt immediate surgical debridement.

Management

Emergent Surgical Debridement

Surgeon-D-Bride-emergency lights

Necrotizing fasciitis is a surgical emergency and requires immediate surgical debridement in order to excise all devitalized and infected tissue to prevent further spread. Continual debridement and re-examination in the OR should be done every 1-2 days until necrotic tissue is no longer visualized.

Vasopressors and Fluids

IV-fluid-vase-present

Patients with necrotizing fasciitis will likely require aggressive resuscitation with IV fluids and pressors, as they will frequently present in septic shock.

IV Immune Globulin If Strep Toxic Shock Syndrome

IV-gold-goblin shocking stripper-apple pie

In cases of necrotizing fasciitis complicated by toxic shock syndrome thought or confirmed to be due to group A streptococcus (Streptococcus pyogenes), treatment with IV immune globulin (IVIG) in combination with antibiotics has been shown to reduce mortality compared to treatment with antibiotics alone. This likely results from decreased circulating toxin as a result of IVIG administration.

Antibiotic Regimen

Carbapenem Or Piperacillin-Tazobactam

Carpet-penny- oars- pipe-taz

The antibiotic regimen for patients with necrotizing fasciitis should include a carbapenem (such as meropenem or ertapenem) or alternatively piperacillin-tazobactam. This allows for coverage of gram positives, gram negatives, and anaerobes.

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PLUS Clindamycin

Plus-sign-cleaning mice

Clindamycin is also typically included in the antibiotic regimen for treatment of necrotizing fasciitis. Clindamycin is especially useful due to its ability to halt toxin production, as its mechanism involves inhibition of bacterial ribosomes needed for protein production.

PLUS MRSA Coverage

Plus-sign-MR Saw

An antibiotic regimen for treatment of necrotizing fasciitis should also cover for MRSA. Antibiotics such as vancomycin or daptomycin are reasonable choices to this end.

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