



## ERYSIPELAS

Erysipelas is a distinct type of superficial cutaneous cellulitis with marked dermal lymphatic

vessel involvement caused by group

A  
β-hemolytic streptococcus (very uncommonly group C or G streptococcus) and rarely caused by  
S.  
aureus

. In the newborn, group B streptococci can cause erysipelas.

Lymphedema  
, venous stasis, web  
intertrigo  
, and obesity are risk factors in the adult patient.

In the absence of underlying edema or other skin abnormalities, erysipelas

usually begins on the face or a lower extremity, heralded by pain, superficial erythema, and  
plaque-like edema with a sharply defined margin to normal tissue . These findings are often  
described as

peau  
d'orange

appearance. In the presence of antecedent edema or other anatomic abnormalities, the margin  
between normal and diseased soft tissue may be obscure, much as in primary  
cellulitis

. There may not be an obvious portal of entry, and skipped areas may confuse the nature of the  
process. Facial erysipelas is less frequent than lower extremity disease and begins unilaterally  
but may spread by contiguity over the nasal prominence to involve the face symmetrically . The  
oropharynx  
may be a portal of entry, and throat culture may show GAS. Inflammatory edema may extend to  
the eyelids, but orbital complications are rare. Fever may precede local signs, and, occasionally,  
before distal extremity

findings, patients complain of groin pain caused by swelling of a femoral node. Lymphangitis  
and abscess are very rare, but the process may spread rapidly from the initial lesion.

Occasionally, in addition to rapid spread of the  
erythematous  
, edematous plaque,  
bullae  
may form in the involved area.

## □ Etiology of Soft-Tissue Infections

### TYPE OF INFECTION

### MOST COMMON CAUSE(S)

### UNCOMMON CAUSES

Erysipelas

Group A streptococcus

Group B, C, and G streptococcus, *Staphylococcus aureus*

Cellulitis

*S. aureus*, group A streptococcus

Group B, C, and G streptococcus, *Streptococcus pneumoniae*; *Pneumococcus*

Cellulitis in children

*S. aureus*, group A streptococcus

Group B streptococcus (neonates)

Facial/ periorbital cellulitis

*S. aureus*, group A streptococcus

*Neisseria meningitides, H. influenzae* (young children)

Perianal cellulitis

Group A streptococcus

*S. aureus*

Cellulitis                      second degree to                      bacteremia

*Pseudomonas aeruginosa*

*V. vulnificus* ; *S. pneumoniae* ;

Crepitant                      cellulitis

Histotoxic                      *Clostridia* sp., ( *C. perfringens* )

*Bacteroides* sp.;                      Peptostreptococci ;                      *E. coli*,

Cellulitis                      associated with water exposure

*E. rhusiopathiae* ( *erysipeloid* )

*V. vulnificus* ,                      *Aeromonas hydrophila*

Gangrenous                      cellulitis                      (infectious gangrene)

NF

Streptococcal gangrene

Group A streptococcus

Groups B, C, and G streptococcus

Nonstreptococcal      NF

Mixed infection with one ~~Peptostreptococcus~~ ( or *Bacteroides* )

Synergistic necrotizing cellulitis      a

Polymicrobial      with facultative and anaerobic organisms that originate in the intestine; ~~Bacteroides~~

Facultative

Coliforms : *E. coli, Proteus, Klebsiella*

Anaerobes

*Bacteroides* , *Peptostreptococcus* , *Clostridium,* *Fusoba*



Fournier gangrene

Similar to                      nonstreptococcal                      NF (type I)

Clostridial                      soft-tissue infections

*C.*                      *perfringens*                      ,                      other                      histotox

Anaerobic                      cellulitis

Anaerobic                      myonecrosis                      (gas gangrene)

Spontaneous,                      nontraumatic                      anaerobic                      myonecrosis

*C.*                      *septicum*                      (                      bacteremic                      )

Nonclostridial anaerobic cellulitis

Various *Bacteroides* sp., peptostreptococci ,

Progressive bacterial synergistic gangrene ( gangrene)

Mixed bacterial infection

Ulcer base

*S. aureus*

*Proteus* sp., other Gram-negative bacilli

Advancing margin

Microaerophilic or anaerobic streptococci

Gangrenous cellulitis in the immunosuppressed individual

*P. aeruginosa* (ecthyma gangrenosum)

*Bacillus* sp., other bacterial and fungal sp.

a

Essentially the same as nonstreptococcal

necrotizing

fasciitis

Recurrent erysipelas is associated with saphenous vein harvest (occasionally in association with tinea pedis) and lymphedema complicating mastectomy with axillary node dissection. In these cases, erysipelas presents with edema and erythema along lines of venectomy or nodal dissection. In addition, resultant lymphedema from a previous episode of erysipelas is a risk factor for recurrence, particularly on the lower extremities. Congenital lymphedema (Milroy disease) may also lead to recurrent erysipelas.