

Necrotising fasciitis

Necrotising fasciitis

Meleney's synergistic gangrene and Fournier's gangrene are variants of a similar disease process. Necrotising fasciitis results from synergistic polymicrobial infection, most commonly a group A β -haemolytic *Streptococcus* in combination with *Staphylococcus*, *Escherichia coli*, *Pseudomonas*, *Proteus*, *Bacteroides* or *Clostridium*; 80% of patients have a history of previous trauma/infection and over 60% of cases commence in the lower extremities. Predisposing conditions include diabetes mellitus, smoking, penetrating trauma, pressure sores, immunosuppression, intravenous drug abuse, perineal infection (perianal abscess, Bartholin's cysts) and skin damage/infection (abrasions, bites, boils). Summary box 45.1 Necrotising fasciitis

Classical clinical signs include oedema stretching beyond visible skin erythema; a woody-hard texture to the subcutaneous tissues; an inability to distinguish fascial planes and muscle. Frank Meleney, 1889–1963, American surgeon in the First World War, then became a Professor at Columbia Medical School in New York, NY, USA. Jean Fournier, 1832–1914, French dermatologist, also described tertiary syphilis. Caspar Bartholin (Secundus), 1655–1709, Professor of Medicine, Anatomy and Physics, Copenhagen, Denmark, described these glands in 1677.

groups on palpation; disproportionate pain in relation to the affected area, with associated skin vesicles and soft-tissue crepitation (Figure 45.9). Lymphangitis tends to be absent. Early on, patients may be febrile and tachycardic, with a very rapid progression to septic shock. Radiographs, which should not delay urgent treatment, may demonstrate air in the tissues. Management should commence with urgent fluid resuscitation, monitoring of haemodynamic status and administration of high-dose intravenous broad-spectrum antibiotics. This is a surgical emergency and the diseased area should be debrided as soon as possible until viable, healthy tissue is reached. Early surgical review and further debridement is advisable, together with the use of vacuum-assisted dressings. Early skin grafting in selected cases may minimise hyperbaric oxygen therapy and fluid losses. Where available, hyperbaric oxygen therapy may be helpful. Mortality of between 30% and 50% can be expected, even with prompt operative intervention.

Surgical emergency Polymicrobial synergistic infection 80% have a history of previous trauma or

infection Rapid progression to septic shock Urgent resuscitation, antibiotics and surgical debridement Mortality 30–50%

Figure 45.8 Cellulitis affecting the left leg (courtesy of St John's Institute for Dermatology, London, UK).

Necrotising fasciitis

Meleney's synergistic gangrene and Fournier's gangrene are variants of a similar disease process. Necrotising fasciitis results from synergistic polymicrobial infection, most commonly a group A β -haemolytic *Streptococcus* in combination with *Staphylococcus*, *Escherichia coli*, *Pseudomonas*, *Proteus*, *Bacteroides* or *Clostridium*; 80% of patients have a history of previous trauma/infection and over 60% of cases commence in the lower extremities. Predisposing conditions include diabetes mellitus, smoking, penetrating trauma, pressure sores, immunosuppression, intravenous drug abuse, perineal infection (perianal abscess, Bartholin's cysts) and skin damage/infection (abrasions, bites, boils). Summary box 45.1 Necrotising fasciitis

Classical clinical signs include oedema stretching beyond visible skin erythema; a woody-hard texture to the subcutaneous tissues; an inability to distinguish fascial planes and muscle. Frank Meleney, 1889–1963, American surgeon in the First World War, then became a Professor at Columbia Medical School in New York, NY, USA. Jean Fournier, 1832–1914, French dermatologist, also described tertiary syphilis. Caspar Bartholin (Secundus), 1655–1709, Professor of Medicine, Anatomy and Physics, Copenhagen, Denmark, described these glands in 1677. groups on palpation; disproportionate pain in relation to the affected area, with associated skin vesicles and soft-tissue crepitation (Figure 45.9). Lymphangitis tends to be absent. Early on, patients may be febrile and tachycardic, with a very rapid progression to septic shock. Radiographs, which should not delay urgent treatment, may demonstrate air in the tissues. Management should commence with urgent fluid resuscitation, monitoring of haemodynamic status and administration of high-dose intravenous broad-spectrum antibiotics. This is a surgical emergency and the diseased area should be debrided as soon as possible until viable, healthy tissue is reached. Early surgical review and further debridement is advisable, together with the use of vacuum-assisted dressings. Early skin grafting in selected cases may minimise protein, hyperbaric oxygen therapy and fluid losses. Where available, hyperbaric oxygen therapy may be helpful. Mortality of between 30% and 50% can be expected, even with prompt operative intervention.

Surgical emergency Polymicrobial synergistic infection 80% have a history of previous trauma or infection Rapid progression to septic shock Urgent resuscitation, antibiotics and surgical debridement Mortality 30–50%

Figure 45.8 Cellulitis affecting the left leg (courtesy of St John's Institute for Dermatology, London, UK).

Necrotising fasciitis

Meleney's synergistic gangrene and Fournier's gangrene are variants of a similar disease process. Necrotising fasciitis results from synergistic polymicrobial infection, most commonly a group A β -haemolytic *Streptococcus* in combination with *Staphylococcus*, *Escherichia coli*, *Pseudomonas*, *Proteus*, *Bacteroides* or *Clostridium*; 80% of patients have a history of previous trauma/infection and over 60% of cases commence in the lower extremities. Predisposing conditions include diabetes mellitus, smoking, penetrating trauma, pressure sores, immunosuppression, intravenous drug abuse, perineal infection (perianal abscess, Bartholin's cysts) and skin damage/infection (abrasions, bites, boils). Summary box 45.1 Necrotising fasciitis

Classical clinical signs include oedema stretching beyond visible skin erythema; a woody-hard texture to the subcutaneous tissues; an inability to distinguish fascial planes and muscle.

Frank Meleney, 1889–1963, American surgeon in the First World War, then became a Professor at Columbia Medical School in New York, NY, USA. Jean Fournier, 1832–1914, French dermatologist, also described tertiary syphilis. Caspar Bartholin (Secundus), 1655–1709, Professor of Medicine, Anatomy and Physics, Copenhagen, Denmark, described these glands in 1677.

groups on palpation; disproportionate pain in relation to the affected area, with associated skin vesicles and soft-tissue crepitation (Figure 45.9). Lymphangitis tends to be absent. Early on, patients may be febrile and tachycardic, with a very rapid progression to septic shock. Radiographs, which should not delay urgent treatment, may demonstrate air in the tissues. Management should commence with urgent fluid resuscitation, monitoring of haemodynamic status and administration of high-dose intravenous broad-spectrum antibiotics. This is a surgical

emergency and the diseased area should be debrided as soon as possible until viable, healthy tissue is reached. Early surgical review and further debridement is advisable, together with the use of vacuum-assisted dressings. Early skin grafting in selected cases may minimise protein hyperbaric oxygen therapy and fluid losses. Where available, hyperbaric oxygenation after debridement may be helpful. Mortality of between 30% and 50% can be expected, even with prompt operative intervention.

Surgical emergency Polymicrobial synergistic infection 80% have a history of previous trauma or infection Rapid progression to septic shock Urgent resuscitation, antibiotics and surgical debridement Mortality 30–50%

Figure 45.8 Cellulitis affecting the left leg (courtesy of St John's Institute for Dermatology, London, UK).

Revision #1

Created 2025-12-31 15:17:08 UTC by Omar Ayman

Updated 2025-12-31 15:17:08 UTC by Omar Ayman