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Necrotizing Fasciitis: The “flesh eating” disease

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Recommended Citation
Necrotizing fasciitis, often referred to as the “flesh-eating disease,” is a rare bacterial infection with an extremely high mortality rate with symptoms that begin subtle but can quickly ravish the human body.1 While the causative bacteria are relatively low, evidence of this disease can be tracked back as far as the 5th century BC where it was initially described by Hippocrates.2 It was not until 1992, however, that Dr. Bob Wilson termed the disease “necrotizing fasciitis.” The rapid progression of this disease and the absence of an effective treatment causes in a patient is extremely intriguing. This “flesh-eating disease” can present as an unsuspecting reddened area and manifest into a serious life-threatening condition with a mortality rate as high as 70% in a matter of hours if not properly identified and treated.3 The underlying bacteria that cause necrotizing fasciitis in an individual can consume fat up to 1 in 1,000 of the flas h e vel y.3

Necrotizing fasciitis is reported in 4.3 infections for every 100,000 people worldwide.4 The overall prevalence of necrotizing fasciitis in the United States is also relatively unknown, with an estimated 2,000 to 10,000 cases being reported each year.5 The disease has been reported higher in males versus females with rates being 3.5 to 4.5 times more often in adults versus children.6 The presence of this disease however has increased nearly five-fold in the past 5 to 10 decades which can most likely be related to a growing older population with increased comorbidities and predisposing risk factors, the most common of which being diabetes mellitus.7 Other risk factors predisposing an individual to necrotizing fasciitis are immune deficiencies such as AIDS, malignancies and complement C1 deficiency. Intervenous drug users and individuals with dermatological compromises such as psoriasis and skin breakdown are also at increased risk.2,3

Necrotizing fasciitis can be caused by a variety of bacterial infections including Klebsiella, Clostridium, E. coli, Staphylococcus aureus, Aeromonas hydrophila, as well as the most commonly found cause, group A Streptococcus (GAS).8 While necrotizing fasciitis can develop anywhere on the body, development is most typically seen around the nasal, perianal and genital areas. Individuals predisposed to conditions and risk factors such as diabetes mellitus, chronic oral and advanced age put the individual at an increased risk.9 The descriptively process of necrotizing fasciitis begins once the bacteria enter the subcutaneous tissue of the body. Any and all of these types of bacteria can enter through a variety of ways including a burn, laceration, insect bite, or even a minor scrape.10 The diagnosis of necrotizing fasciitis is often missed because the initial symptoms can be so subtle and is often mistaken for cellulitis.11 The initial diagnosis can also be masked because “the cutaneous manifestations of the disease are often very limited.”12 Since the overall mortality of necrotizing fasciitis has been reported as high as 77%, diagnosis of this is almost important to the significant mortality.13 Signs such as erythema, diagnosis of necrotizing fasciitis is often aided by palpation, and presence of bullae.14

The “flesh-eating disease” can present anywhere on the body. While the presence of the disease remains low, this disease is often missed because the initial symptoms can be so subtle and is often mistaken for cellulitis. Additional risk factors such as diabetes mellitus, chronic oral and advanced age put the individual at an increased risk. The disease has the potential to be life threatening and has a mortality rate as high as 70% in a matter of hours if not properly identified and treated. While the causative bacteria are relatively low, evidence of this disease can be tracked back as far as the 5th century BC where it was initially described by Hippocrates. While the disease has been seen in all ages and genders, the disease is more commonly found in younger patients.13

Early Signs:
- Dull pain orerness at site
- Localised warmth, redness and/or swelling
- Flu-like symptoms
- Severe progressing local pain out of proportion to the size and physical presentation of site
- Hard “wooden” feel to area
- Ulceration
- Lymphangitis with left shift upon CBC
- Late:
- Formation of bullae and blistering
- Numbness at site replacing pain indicating destruction of subcutaneous nerves
- Crepitation in evidence of necrosis
- Site redness changes to dusky blue-gray color
- Metabolic acidosis
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Predisposing conditions and factors for necrotizing fasciitis:
- Diabetes
- Chronic renal failure
- Alcohol abuse
- Perianal vascular disease
- Malignancy
- Immunosuppressive therapy
- Chronic inflammatory and pulmonary disease
- Peri-neuronal infections
- Viral infections
- Post-surgical infection
- Infiltrative drug abuse
- Burns
- Infections
- Surgery
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