

Epidemiology and Outcomes of Necrotizing Soft Tissue Infections: A Population-Based Incidence Study of California Hospitalizations in 2016

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Purpose:

Soft tissue infections (STI) encompass a wide spectrum of disease, ranging from often benign cellulitis to necrotizing soft tissue infections (NSTI) which have a mortality rate as high as 20-40%. Diagnosis of NSTI is hampered by a lack of characterization. More research is needed to determine the epidemiology of NSTI, the spectrum of disease over time, and risks for severe disease.

Methods used:

Retrospective analysis of the California Office of Statewide Health Planning and Development Patient Discharge Database for the year 2016 was used. Patients were selected using ICD-10 codes representative of the spectrum of STI and NSTI as the principal diagnosis code. Population-based incidence was calculated using the census-obtained population.

Summary of results:

1925 patients were included. This incidence of NSTI within this population is 4.9/100,000. 68% are male and 49% are white with a median age of 55. Common comorbidities include HTN (61%), DM (60%), and ICDU (39%). Common anatomic locations include the lower extremity (37%) and perineum (27%). 32% of patients experienced severe sepsis with 15% going into septic shock. 24% were placed on mechanical ventilation. The mortality rate was 15%. Of those that survived, 52% were discharged home.

Conclusions:

The prevalence of NSTI is higher than previously reported, especially among among 50-59 year-old white males. Common comorbidities include DM, HTN, and IVDU. Many, but not the majority, required advanced ICU care, with 50% being discharged home and approximately 15% succumbing to the disease. This study increases the availability of epidemiological data for this disease process. Future goals include necrotizing NSTI in diabetic patients for earlier prevention, diagnosis, and management.