

Background

- Background:
 - Necrotizing soft tissue infections:
 - Incidence reported at 500-1500/year or 0.4/100,000 (group A strep)¹
 - More recent estimates use databases with sampling, requiring back calculations
 - Misdiagnosis is common: 41 - 96%²
 - Mortality: 4-46%³
 - Lack of epidemiologic data limits diagnostic and prognostic calculators
- Purpose:
 - Assess patients with NSTI hospitalized in CA in 2016
 - Population-based incidence
 - Demographics, comorbidities, anatomic spectrum
 - Patient outcomes

Methods

- Retrospective review:
 - California Office of Statewide Health Planning and Development Patient Discharge Database
 - All hospitalized patients
 - 2016
 - Patients selected using ICD-10 diagnosis codes; operative interventions assessed via ICD-10 procedure codes
 - Excluded patients previously hospitalized for soft tissue infection before 2016

Results

- 1925 patients
- Incidence: 4.9/100,000

| Demographics | N (%) or median (IQR) |
|--------------|-----------------------|
| Male sex | 1312 (68%) |
| White race | 933 (49%) |
| Age (years) | 55 (44 -64) |

| Comorbidities | N (%) |
|------------------------|-------------|
| Hypertension | 1,172 (61%) |
| Diabetes mellitus | 1,150 (60%) |
| Injection drug use | 743 (39%) |
| Obesity | 634 (33%) |
| Chronic kidney disease | 517 (27%) |
| Venous insufficiency | 470 (24%) |
| Cancer | 249 (13%) |

| Disposition | N (%) |
|----------------------------|-----------|
| Home/self care/home health | 993 (52%) |
| SNF/intermediate care | 548 (28%) |
| Rehabilitation | 29 (2%) |
| Other inpatient facility | 44 (2%) |
| Death/hospice | 297 (15%) |
| Other | 14 (1%) |

| Outcomes | N (%) or median (IQR) |
|------------------------|-----------------------|
| Hospital LOS (days) | 10 (5 - 20) |
| Number of debridements | 1 (1 - 1) |
| Severe sepsis | 619 (32%) |
| Septic shock | 297 (15%) |
| Vasopressors | 83 (4%) |
| Mechanical ventilation | 458 (24%) |
| Tracheostomy | 47 (2%) |
| Dialysis | 98 (5%) |
| Death or hospice | 297 (15%) |

Discussion

- Incidence higher than some historical reports
- Highest prevalence among 50-59-year-old white males
- Common comorbidities: DM, HTN, IVDU
- Many, but not majority, required advanced ICU therapies
- Only ~ 50% discharged home; 15% death/hospice

1.) Bonne SL, et al. *Infect Dis Clin North Am.* 2017., 2.) Chen KJ, et al. *Int J Gen Med.* 2017., 3.) Elliott DC, et al. *Ann Surg* 1996.