Table 1: Recommended and minimally sufficient antibiotic regimens

| **Indication** | **Antibiotic Regimen** | | | |
| --- | --- | --- | --- | --- |
| Non-Fournier’s NSTI | Vancomycin | Clindamycin | Penicillin | Levofloxacin |
| Fournier’s NSTI | Vancomycin | Clindamycin | Piperacillin-tazobactam **OR** Meropenem | |
| Neutropenia | Vancomycin | Clindamycin | Penicillin | Gentamycin |
| Penicillin Allergic | Vancomycin | Clindamycin | Levofloxacin | |

Table 2: Demographic characteristics

|  | **Overall (n=446)** | **Non-Survivors (n=)** | **Survivors (n=)** |
| --- | --- | --- | --- |
| **Age, years (median [IQR])** | 55.0 [43.0, 62.0] |  |  |
| **Male Sex, n (%)** | 290 (65.0%) |  |  |
| **White Race, n (%)** | 343 (76.9%) |  |  |
| **BMI, kg/m2 (median [IQR])** | 31.0 [25.0, 39.0] |  |  |
| **Pre-Existing Conditions, n (%)** |  |  |  |
| Diabetes | 196 (43.9%) |  |  |
| CHF | 23 (5.2%) |  |  |
| CRF | 34 (7.6%) |  |  |
| HTN | 189 (42.4%) |  |  |
| Drug Abuse | 80 (17.9%) |  |  |
| **Transfer, n (%)** | 400 (89.7%) |  |  |
| **Mechanism of Infection, n (%)** |  |  |  |
| Bite | 8 (1.8%) |  |  |
| Boil and/or furuncle | 79 (17.7%) |  |  |
| Burn | 4 (0.9%) |  |  |
| Chronic wound or ulcer | 45 (10.1%) |  |  |
| Injection | 57 (12.8%) |  |  |
| Perirectal abscess | 19 (4.3%) |  |  |
| Postoperative wound infection | 21 (4.7%) |  |  |
| Trauma | 55 (12.3%) |  |  |
| Idiopathic | 148 (33.2%) |  |  |
| Other | 10 (2.2%) |  |  |
| **Body Site(s) Involved, n (%)\*** |  |  |  |
| Head | 8 (1.8%) |  |  |
| Arm | 72 (16.1%) |  |  |
| Chest | 21 (4.7%) |  |  |
| Abdomen | 50 (11.2%) |  |  |
| Perineum | 166 (37.2%) |  |  |
| Leg | 152 (34.1%) |  |  |
| Multiple Regions | 22 (4.9%) |  |  |

Table 3: Microbiological data amongst patients with surgical wound culture results within 48 hours of admission

|  | **Overall (n=378)** | **Non-Survivors (n=)** | **Survivors (n=)** |
| --- | --- | --- | --- |
| **Polymicrobial,^ n (%)** | 276 (73.0%) |  |  |
| **Organisms Present, n (%)** |  |  |  |
| Staphylococcus sp. | 156 (41.3%) |  |  |
| MRSA | 41 (10.8%) |  |  |
| MSSA | 37 (9.8%) |  |  |
| Streptococcal sp. | 209 (55.3%) |  |  |
| GAS | 75 (19.8%) |  |  |
| Clostridium | 12 (3.2%) |  |  |
| Enterococcus | 37 (9.8%) |  |  |
| Candida | 39 (10.3%) |  |  |
| Mixed Anaerobic Flora | 192 (50.8%) |  |  |
| Gram Negative Rods | 136 (35.7%) |  |  |
| **Negative Cultures, n (%)** | 16 (4.2%) |  |  |
| **Infection Related Complication** |  |  |  |
| Bacteremia |  |  |  |
| Osteomyelitis |  |  |  |
| Endocarditis |  |  |  |

^Amongst patients with any positive wound culture

Abbreviations: MRSA, methicillin-resistant *S. aureus*; MSSA, methicillin-sensitive *S. aureus*; GAS, group A Streptococci

Table 4: Antibiotics prescribed in 24 hours of admission

|  | **Overall (n=446)** | **Non-Survivors (n=)** | **Survivors (n=)** |
| --- | --- | --- | --- |
| **Antibiotic Regimen:** |  |  |  |
| Non-Fournier’s Regimen, n (%) |  |  |  |
| Fournier’s Regimen, n (%) |  |  |  |
| Neutropenic Regimen, n (%) |  |  |  |
| Penicillin Allergic Regimen, n (%) |  |  |  |
| Any Recommended Regimen, n (%) |  |  |  |
| **Individual Antibiotics:** |  |  |  |
| Vancomycin, n (%) |  |  |  |
| Clindamycin, n (%) |  |  |  |
| Levofloxacin, n (%) |  |  |  |
| Penicillin, n (%) |  |  |  |
| Piperacillin-tazobactam, n (%) |  |  |  |
| Meropenem, n (%) |  |  |  |
| Ciprofloxacin, n (%) |  |  |  |
| Gentamycin, n (%) |  |  |  |
| Metronidazole, n (%) |  |  |  |

Table 5: Duration of antibiotics use (hours between admission and final dose) amongst survivors

|  | **Survivors (n=)** | **Uncomplicated NSTI (n= )** | **Complicated NSTI\* (n= )** |
| --- | --- | --- | --- |
| Any antibiotic, hours (median [IQR]) |  |  |  |
| Vancomycin, hours (median [IQR]) |  |  |  |
| Clindamycin, hours (median [IQR]) |  |  |  |
| Levofloxacin, hours (median [IQR]) |  |  |  |
| Penicillin, hours (median [IQR]) |  |  |  |
| Piperacillin-tazobactam, hours (median [IQR]) |  |  |  |
| Meropenem, hours (median [IQR]) |  |  |  |
| Ciprofloxacin, hours (median [IQR]) |  |  |  |
| Gentamycin, hours (median [IQR]) |  |  |  |
| Metronidazole, hours (median [IQR]) |  |  |  |

\*Complicated NSTI refers to patients diagnosed with concomitant bacteremia, osteomyelitis, or endocarditis, which influence antibiotic duration independent of local or systemic signs of infection

Figure 1: Kaplan Meier survival curve plotting percentage of patients still on antibiotics on y axis, days on x axis. Survivors only.

Table 6: Patient characteristics at the time of discontinuation of last antibiotic, stratified by presence or absence of infection-related complication, and by failure or success of discontinuation amongst patients who survived.

|  | **Survivors (n=)** | **Uncomplicated NSTI (n= )** | **Complicated NSTI\* (n= )** | **Discontinuation success (n= )** | **Discontinuation failure (n= )** |
| --- | --- | --- | --- | --- | --- |
| WBC (median [IQR]) |  |  |  |  |  |
| Time since last debridement, hours (median [IQR]) |  |  |  |  |  |
| ??? |  |  |  |  |  |

Table 7: Risk factors associated with failure of discontinuation of antibiotic (as indicated by re-initiation of antibiotics after prior discontinuation) on univariate and multivariate regression amongst patients who survive.

|  | **Univariate Analysis** | | | **Multivariate Analysis** | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Risk Factor** | **Odds Ratio** | **95% CI** | **p value** | **Odds Ratio** | **95% CI** | **p value** |
| WBC  WBC > 10 |  |  |  |  |  |  |
| Time since last debridement  < 24 hours since last debridement  < 72 hours since last debridement |  |  |  |  |  |  |
| Fever in previous 24 hours |  |  |  |  |  |  |
| ??? |  |  |  |  |  |  |