Free Papers D

[O76] EPIDEMIOLOGY, CLINICAL FEATURES AND OUTCOMES OF NATIVE JOINT SEPTIC ARTHRITIS IN ADULTS IN SOUTH AUCKLAND, NEW ZEALAND

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Aim: To describe the epidemiology, clinical features and outcomes of native joint septic arthritis in adults admitted to Middlemore Hospital in Auckland, New Zealand.

Method: Single-centre retrospective cohort study from 2009 to 2014. Patients ≥16 years of age were identified using ICD-10AM coding data. Electronic records were reviewed for demographic, clinical, laboratory, treatment and outcome data. Total and hemi-arthroplasty infections were excluded.

Results: 543 episodes in 521 patients were included, with 90% fulfilling Modified Newman's criteria. Septic arthritis incidence was 26/100,000 patient years and was unchanged over the study period. Incidence correlated strongly with age (R^2=0.79) and socioeconomic deprivation (R^2=0.76).
Median age was 49 years, and gender 70% male. Ethnicity was Pacific Island in 36% (22.8% of catchment population). The most commonly involved joints were hand interphalangeal (19%), knee (19%), metacarpophalangeal (17%) and glenohumeral (11%). Arthritis was monoarticular in 93%.
Underlying conditions included current smoking (42%), osteoarthritis (29%), diabetes (22%) and gout (15%). Rheumatoid and seronegative arthritis were uncommon (each 2%). Skin/soft tissue infection occurred within 3 months prior in 38%. Osteomyelitis occurred in 26%. Sources of infection included haematogenous (42%), traumatic (34%), and iatrogenic (17%).
Causative organism(s) were isolated in 80% of episodes, most commonly ***Staphylococcus aureus*** (53%, 13% of which were MRSA) then ***Streptococcus pyogenes*** (15%). 28% of culture-positive episodes were polymicrobial. Median antibiotic duration was 4 weeks, with 38% having definitive therapy orally. A median of 1 surgical procedure was undertaken during treatment.
Mortality at 30 days was 3%, at 90 days 5% and treatment failure (defined as any of: death <90 days; relapse; reinfection; or ongoing joint infection leading to readmission, amputation, arthrodesis or excision arthroplasty) occurred in 17%. Treatment failure was significantly more common in cases involving large joints (23%, (69/302) vs. 11%, (26/241), p=0.0002) and in haematogenous episodes versus traumatic episodes (21% (47/229) vs. 10% (19/168), p=0.0045).

Conclusions: This is the largest series of adult native joint septic arthritis currently available. The extremely high observed septic arthritis incidence (26/100,000 person years) may relate to high rates of skin and soft tissue infection in Auckland, particularly among Pacific people. Small joint infection, often excluded from previous studies, is associated with significantly better outcomes than large-joint infection. Mortality is lower in this cohort than previously reported, possibly due to the inclusion of small joint infections and exclusion of prosthetic joint infections.

Acknowledgements: No additional funding was received for this work.