P2295 Original surgical management of pressure ulcer-related osteitis and short antibiotic treatment

Latifa Noussair\textsuperscript{1}, Benjamin Davido\textsuperscript{1}, Clara Duran\textsuperscript{1}, Frédérique Bouchand\textsuperscript{1}, Guillaume Auberge\textsuperscript{1}, Nich Christophe\textsuperscript{1}, Christine Lawrence\textsuperscript{1}, Jean-Louis Gaillard\textsuperscript{2}, Jean-Louis Hermann\textsuperscript{1}, Alain Lortat-Jacob\textsuperscript{2}, Alexis Descatha\textsuperscript{1}, Martin Rottman\textsuperscript{1}, Haude Chaussard\textsuperscript{1}, Aurélien Dinh*\textsuperscript{1}

\textsuperscript{1} Raymond Poincaré University Hospital, Garches, \textsuperscript{2} Ambroise Paré University Hospital, Boulogne-Billancourt

**Background:** Pressure ulcers associated with osteitis are frequent among patients with spinal cord injury (SCI), and optimal management is not well known. We aim to present and evaluate an original strategy with surgery followed by short antibiotic treatment (less than 10 days) on a large cohort in a referral center.

**Materials/methods:** We performed a retrospective study (from May 1st, 2015 to September 30th, 2018) on SCI patients with pressure ulcer-related osteitis in a referral center. We included all patients who underwent surgery with surgical debridement and flap-covering wound, followed by 10 days or less of antibiotic treatment adapted to peroperative samples.

Failure was a composite criteria defined during a 45-day follow up period as i) dehiscence, ii) local signs of inflammation, iii) sepsis, or iii) additional antibiotic treatment.

We identified risk factors associated with failure.

**Results:** Overall, 297 patients were included; sex ratio (M/F) was 1.08, and mean age was 53.9±13.9 yo.

Considering SCI, 207 (69.7%) patients were paraplegic and 76 (25.6%) were tetraplegic.

Aetiology for SCI was traumatic in 200 (67.3%) cases.

Main microorganisms identified were: Enterobacteriaceae sp. (n=174; 58.6%), coagulase-negative staphylococci (n=171; 57.6%), Staphylococcus aureus (n=170; 57.2%), Streptococcus sp. (n=128; 43.1%), Corynebacterium striatum (n=132; 44.4%), Enterococcus faecalis (n=95; 32.0%), anaerobes (n=94; 31.6%). Multidrug-resistant organisms (MDRO) were involved in 60 (20.2%) cases.

Favorable outcome was found in 253 (85.2%) cases.

Failure was due to dehiscence (n=37; 12.5%), additional antibiotic treatment (n=28; 9.4%), local signs of inflammation (n=22; 12.5%), and sepsis (n=3; 1.0%).

The only risk factors for failure found were anaerobic positive culture (OR 3.14 [1.63; 6.03]) and positive culture of suction drainage (OR 2.23 [1.10; 4.52]).

Longer treatment duration (more than 7 days) and peroperative samples positive to MDRO were not associated with better outcome (p=0.4105 and p=0.6515, respectively).

**Conclusions:** Thanks to our cohort, which is one of the largest in the literature, we demonstrated that a treatment strategy for pressure ulcer-related osteitis among SCI patients combining surgical debridement and flap-covering wound, followed by an antibiotic treatment for less than 7 days, seems safe.