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ePoster Viewing

Sepsis, bloodstream and graft infections: *Staphylococcus aureus* and others

CHARACTERISTICS AND PROGNOSIS OF PATIENTS WITH STAPHYLOCOCCAL PROSTHETIC VASCULAR GRAFT INFECTION (PVGI): A PROSPECTIVE COHORT OF 92 PATIENTS

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Objectives: To describe the characteristics and prognosis of patient admitted for a staphylococcal PVGI and to assess the existence of any relation between failure (relapse or recurrence) and patients' characteristics.

Methods: All consecutive patients admitted in our department between January 1, 2000 and August 1, 2013 for a staphylococcal PVGI (n=92) were enrolled in the present prospective cohort study. PVGIs were divided into extracavitary (femoro-femoral, femoro-popliteal and axillo-femoral) and cavitory (aorto-iliac, aorto-femoral, ilio-femoral, aortic). Non-parametric Wilcoxon rank-sum test and Fisher exact test were used to compare the patients' baseline characteristics. In addition, we used the Kaplan-Meier method to perform a time-to-event analysis, and a log-rank test to compare 'failure' distributions, stratified on the type of PVGI.

Results: Ninety-two patients (79 males; 86%) of mean age 64.5 years [IQR: 58-76] admitted for staphylococci PVGI were included. Fifty-two patients had a cavitory PVGI (57%) and 44 cases had early post-operative infection (i.e. within 4 months following the intervention 52%). The most frequent co-morbidities were diabetes mellitus (n=27), chronic obstructive pulmonary (n=22), obesity (n=52), coronary arterial disease (n=51) and hypertension (n=71). Bacterial cultures were obtained from intra-operative samples in 53 patients, from blood samples in 15 patients (18%), from both in 21 patients (25%) and from abscess transcutaneous aspiration in 3 patients. Methicillin-susceptible *S. aureus* (MSSA) was the predominant pathogen (n=54), followed by coagulase negative staphylococci (n=23), methicillin-resistant *S. aureus* (MRSA) (n=19), *Streptococcus* spp. (n=6), enterobacteriaceae (n=15) and strict anaerobes (n=3); PVGI was polymicrobial in 23 patients (25%). Surgery was performed in 78 patients (85%), with replacement of the infected implants by autologous vein (n = 14), prosthetic conduit (n = 8) or allograft/homo- graft (n = 26). Most patients were given dapomycin or vancomycin for methicillin-resistant staphylococci coverage. The median follow-up was 14.7 months [IQR: 6-25] during which 14 patients died due to PGVI (15%); 21 patients (23%) failed (relapse or recurrence of infection) within a median period of 2.7 months [IQR: 0.9-69]. The overall clinical cure rate was statistically higher in patients with extracavitary PVGI (p=0.02). Patients with cavitory PVGI were treated without surgery more frequently (22% versus 7%; p=0.08) and had a lower mortality rate (2% versus 25%; p=0.02). In univariate analysis, failure was associated with fever at admission (p=0.01), concomitant bloodstream infection (p=0.06), and prosthetic graft thrombosis (p[\leq 1] =0.05). Patients with MRSA or MSSA related PVGI had similar clinical outcome (p=0.4)

Conclusions: Our results suggest that treatment failure of staphylococcal PVGI depends on the site of infection and on clinical presentation at admission with a better prognosis recorded in patients with extracavitary PVGI or without sepsis. MRSA related PVGI was not associated with a poorer outcome in our patients.