

*burgdorferi* s.l. evidenced by the presence of IgM antibodies to OspC of *B. burgdorferi* s.s., *B. afzelii*, *B. garinii*, and *B. spielmanii*. The detection of antibodies directed against specific *B. spielmanii* antigens suggests that this microorganism may be responsible for triggering borreliosis both as a single etiologic agent and in co-infection with other *Borrelia* genospecies.

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#### Enterococcal bone and joint infections: A working group experience along 17 years

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**Background:** Enterococcal bone and joint infections (EBJI) are an uncommon disease and the optimal treatment and outcome have been poorly defined. The objective was to analyze the outcome of EBJI episodes (ep.) according to patients' characteristics and microbiological features, considering type of surgery implemented and antibiotic treatment chosen.

**Methods:** We performed a retrospective cohort study of patients with EBJI, treated by our working group from 1/91 to 3/09. Categorical variables are presented as percentages and continuous variables as median and interquartile range (IQR). Differences were considered statistically significant at  $p \leq 0.05$ .

**Results:** We evaluated 35 EBJI ep. occurred in 34 patients accounting for 3.3% of all BJI (35/1071) seen in the period considered. Median age 63 years old (range IQR 40-72), 63% female patients. Comorbidities (diabetes, peripheral vascular disease, cancer) were found in 31.4%. Twenty eight ep. (80%) were implants associated infections (IAI) (15 prosthetic joint, 13 fractures with internal fixation) and 7 (20%) osteomyelitis (OM; 86% chronic). Five ep. (14.3%) had polymicrobial cultures (4 *P. aeruginosa*, 1 MRSA). All patients receive antibiotic therapy (35 aminopenicillins, 5 glycopeptides, 1 carbapenems) during a median of 13 weeks (IQR 8-24); 13 (37,1%) were treated with combined aminoglycosides and 22 (62,8%) without them. Fifteen ep. (42,8%) underwent prolonged suppressive therapy for a median of 16 weeks (IQR 4-32). Surgery was performed in 19 ep. (67,8%) of IAI (52,6% with debridement and retention of the implant) and 4 ep. (57,1%) of osteomyelitis. Follow up: 15 months (median; IQR 10-24). The overall outcome was favorable in 30 ep. (85,7%); there were 5 relapses (14,3%) and no failures. Using an univariate analysis, we evaluated the outcome according this variables: age, gender, comorbidities, microbiology, implant, surgery performed and its modality, use of

**Conclusion:** EBJI are an uncommon disease mostly associated to implants. Treatment must include surgery and antibiotics. In our series, outcome was not modified by patients' characteristics, presence of an implant, type of surgery performed, length of antibiotic treatment and use of combined therapy with aminoglycosides.

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#### *Bacillus cereus* bacteremia in hospital setting

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**Background:** Since *Bacillus cereus* is rarely associated actual infections, single positive blood culture is often considered as contamination. However, it can cause number of nosocomial infections such as catheter-associated blood stream infection. We investigated the bacteremic patients to assess the clinical impact of this organism.

**Methods:** We performed a retrospective analysis of bloodstream infections due to *B. cereus* at a tertiary care hospital in Kobe, Japan from October 2008 to September 2009. Cases were identified via microbiology laboratory reports, and relevant clinical data were collected from the electronic medical record of each patient. The case with at least 2 set positive blood cultures were defined as real infection.

**Results:** Nine cases of catheter related blood stream infections (CRBSI) caused by *B. cereus* were identified. Only one case had the presence of an indwelling central venous catheter (CVC). Three cases (33%) were associated with previous antibiotic therapy. Two cases (2/9, 22%) were associated with solid organ malignancies whereas no case with hematological malignancy. One patient was on continuous hemodialysis. The most common characteristics (7/9, 77%) were the use of peripheral parenteral nutrition. These 7 cases had use of solutions containing 7.5% glucose and 3.0% amino acid. For 8 cases vancomycin was used with success. No patient died. All isolates were sensitive for vancomycin whereas resistant to beta-lactams. Two isolates were sensitive for clindamycin.

**Conclusion:** *Bacillus cereus* can cause CRBSI. Indwelling CVC may not increase *Bacillus cereus* CRBSI whereas peripheral parenteral nutrition with higher amino acid concentration can be a risk factor. Vancomycin may be appropriate antibiotic for empiric therapy. Further studies are necessary to further determine the risk of *Bacillus cereus* infection.

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