

R661

Publication Only

Clinical ID: Community-acquired infections including CAP, sepsis, STD,...

A cohort of pneumococcal bone and joint infections in adult patients

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Objectives: Pneumococcal bone and joint infection is a rare disease. No recent series are available since the vaccination coverage is encouraged. We present clinical and biological characteristics and outcome of a cohort of 47 cases of pneumococcal bone and joint infection

Methods: We performed a retrospective, multicenter (n=6) study in France and Swiss including referent centers for complex osteoarticular infections.

Case was defined by suggestive clinical and radiological signs and microbiological identification requiring at least one isolate of *Streptococcus pneumoniae* in deep sample (bone and joint or blood culture).

Informations were collected with a standard data set questionnaire.

Results: We present 47 cases with mean age: 66 years old (29-93) and a sex ratio of 1.13.

Twenty-six patients (55.3%) had identified risk factors: diabetes mellitus (n=9), immunosuppressive therapy (n=8), alcoholism (n=7), asplenia (n=5). One vaccine patient had an infection the next year with 6A serotype not included in the vaccine.

Localizations were peripheral joints (n=34), vertebral osteomyelitis (n=10) and both for 3 cases. Orthopaedic prosthesis was involved in 22 (46.8%) patients. An other but concomitant localization was diagnosed in 18 patients: pneumonia (n=9), meningitis (n=2), abscess (n=2), sinusitis (n=2), otitis (n=2), endocarditis (n=1).

Symptoms were acute (<1 month) for 36 patients.

At diagnosis 33 patients (70%) were febrile, mean CRP level was 224.5 mg/L (6.4 -609)

Blood cultures were positive in 27 cases. Two thirds of urinary pneumococcal antigens were positive.

Antibiotic treatment included amoxicillin (n=34), third generation cephalosporin (n=22), rifampicin (n=17) and fluoroquinolone (n=9).

Surgery concerned all prosthetic joint infections.

Four (8.5%) treatment failure were diagnosed: 2 early deaths due to acute sepsis, 1 recurrence probably due to poor compliance and 1 chronic infection within a prosthetic joint infection.

Conclusion: Pneumococcal bone and joint infections is a rare but severe infection in adults. Clinical spectrum is wide but often acute with a previous or concomitant deep airways infection. The outcome is excellent when sepsis is controlled, but its prevention could be easily improved in most of cases by vaccination.