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**Paper Poster Session**  
**Surgical site infection**

**TAPIR preliminary results: Is 6-week antimicrobial therapy effective for early-onset spinal implant infections?**

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**Background:** Early-onset spinal implant infections (SII) incidence remains stable from 2 to 10%. SII requires surgical debridement and is associated with decubitus complications, adverse effects of antibiotic treatments, and increased costs. In the context of emergence of resistance, short duration of antimicrobial treatment is a key of importance. If currently SII treatment duration is 12 weeks, the aim of this work is to evaluate the efficacy and cost of a shorter antimicrobial treatment of 6 weeks.

**Material/methods:** TAPIR is an ongoing prospective study started in November 2014 at Hôpital Européen Georges Pompidou, a 827-bed teaching-hospital. All patients with SII were included from orthopedic surgery department specialized in spinal surgery. SII was suspected in cases of clinical and/or biological sepsis occurring within 30 days after spinal instrumented surgery. After surgical debridement, medical care consisted of a large-spectrum antimicrobial therapy, secondarily adapted according to microbiological analyses, administered ten days intravenously followed by an oral course for a total of 6 weeks. Parameters as gender, age, SII diagnosis' circumstances, date of onset from the 1<sup>st</sup> intervention, pathogens, antimicrobial initial intravenous and oral treatment and follow-up were collected. Success was defined by the absence of relapse after the end of treatment within two years of follow-up. A cost's extrapolation for 12 weeks treatment is actually being calculated to compare real short-treatment costs.

**Results:** Spinal implant surgery was performed in 833 patients from the beginning of the study. To date, 46 patients suffered from SII were included of which 20 females. Median of age was 62.8 (54.2-70.4). Bacteraemia was associated with local scar inflammation in 10 cases (22%). The date of onset from the 1<sup>st</sup> surgery was 15 days (12-23). In 36 cases, SII were monomicrobial (78%). Among monomicrobial infections, *Staphylococcus aureus* was found in 19 cases (53%), coagulase-negative staphylococci in 6 cases (17%), Gram-negative bacilli in 6 cases (17%) and *Propionibacterium acnes* in 3 cases (8%). To date, no relapse was described among the 46 patients with a one year of follow-up.

**Conclusions:** If SII epidemiology remains the same compared to the literature, treatment duration is still a matter of debate. Our preliminary results suggest that a short duration of treatment of 6-weeks is

efficient. A shorter duration of antibiotic treatment is expected to be associated with less adverse effects, a reduction of the length and costs of hospitalization, and a decrease in the emergence of antibiotic resistance.