

# PROLONGED SUPPRESSIVE ANTIBIOTIC THERAPY FOR PROSTHETIC JOINT INFECTION IN PATIENTS OVER 75 YEARS OLD



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## Introduction

Definition of Prolonged Suppressive Antibiotic Therapy (PSAT): an antibiotic therapy prescribed as a long-life treatment. Data about it are scarce.

Our objective: to describe its characteristics and outcomes in prosthetic joint infections (PJI) in elderly patients.

## Methods

- French national retrospective multicentric study.
- Analysis of epidemiological characteristics, drug indication, tolerance, outcomes of a cohort of patients 75 years old and treated with PSAT for PJI.
- Event or failure: withdrawal of PSAT and/or systemic progression of infection under PSAT and/or death.
- A composite binary outcome defined as the first occurring event among these 3 previous type of events was used.

## Results

- 27 centres: infectious diseases (69, 50.7%), orthopaedics (32, 23.5%), geriatrics (18, 13.2%) and internal medicine (17, 12.5%) units.
- 136 patients, median age: 84 years {IQR 79-89}. 132 with identified pathogen.
- Initial intravenous (IV) antibiotic therapy prescribed for 95 patients.
- PSAT prescribed as immediate palliative in 30.1% of cases: betalactam, cotrimoxazole, fluoroquinolone.
- First-line PSAT stopped in 45 patients (33.1%).
- 24 patients died (17.6%); 2 were infection-related (8.3%).
- The median follow-up of patients: 16 months (range 0-112).
- The 2-year survival rate without event was 70% (95% confidence interval [CI], 62.5%-77.5%).
- Increased risk of an event in case of: monomicrobial infection (HR=9.15, P=0.041), Mac Cabe score equal to 3 (HR=2.47, P=0.054), PSAT given by another person (HR=3.39, P=0.006), bacteraemia (HR=2.73, P=0.032) (Stepwise backward regression).
- Initial IV antibiotic therapy associated with a decreased risk of treatment failure (HR=0.43, P=0.006).

## Key conclusions

- Life-long antibiotic therapy might postpone treatment failure and may be beneficial in selected cases, in older patients with limited life expectancy in whom surgery is limb or life-threatening.
- IV therapy may partially reduce the inoculum size, facilitating the efficacy of oral PSAT.
- Large prospective multicentric studies, including comprehensive geriatric assessment, are needed to confirm the place, efficacy and safety of PSAT in PJI and to homogenize medical practice.

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