

# Corynebacterium bone and joint infection (BJI)

## A retrospective cohort from a BJI reference center

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### Aim

- Description of clinical features of all patients and with **proven Corynebacterium BJI** followed up at the Lyon teaching hospital reference centre
- Assessment of **determinants of treatment failure**<sup>1</sup>

<sup>1</sup>Persistent infection or relapse or second surgery for sepsis or superinfection or death related to BJI

### Method

- **Retrospective cohort study** in a tertiary hospital reference center (CRIOAc Lyon, France) between 2007 and 2016
- Including All patients presenting a **proven** Corynebacterium BJIs:
  - ✓ **≥ 2 culture-positive intraoperative samples with the same pathogen AND treated as such by the ID physician**
- **Excluding** decubitus ulcer- and diabetic foot-related BJIs

### Conclusions

1. **Corynebacterium BJI = uncommon, chronic and plurimicrobial**
2. **High failure rate (40%)**, associated with:
  - ✓ **Inappropriate surgical management**
  - ✓ **Use of daptomycin as first line regimen**
3. Should we avoid the use of Daptomycin, or use only in combination therapy ?

### POPULATION

**49 patients**

Males, 71%  
 Median age 54 (IQR, 46-68)

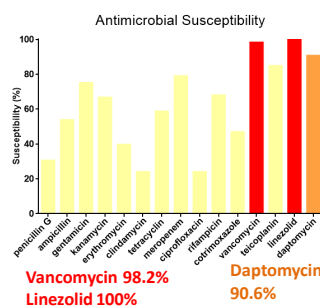
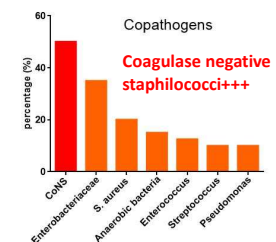
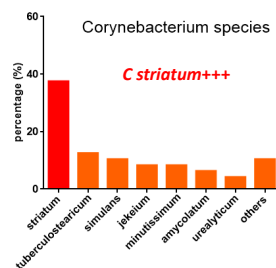
**with 51 BJIs**

- ✓ **Chronic (>4 weeks): 88%**
- ✓ **On orthopaedic implant: 88%**
- Joint prosthesis: 39.5%
- Oseosynthesis: 60.5%
- ✓ **Superinfection 47%**

**Few comorbidities...  
 Majority of trauma**



### MICROBIOLOGY



### FOLLOW UP AND TREATMENT

**Median follow-up: 38 weeks**

**92.2%**

Appropriate: 76.5%  
 > 2 stages : 8.5%  
 Coverage flap: 36.4%

Complex +++

**IV 94.1%**  
 14 weeks (IQR 7-18)

Antimicrobial combination therapy : 75%

**First line:**  
 - Glycopeptid : 69%  
 - Betalactam : 50%

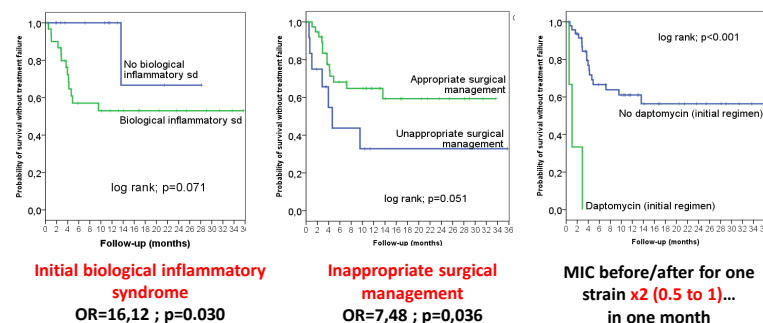
**Second line:**  
 - Betalactam : 41%  
 - Glycopeptid : 39%

**Oral switch 54%**

**20 failures**  
**39.2%**

**14 documented**  
**4 with Corynebacterium (8%)**

### FAILURE RISK FACTORS



**DAPTOMYCIN IN FIRST LINE**

**2 of 3 failures documented with a new Corynebacterium despite appropriate surgery**

### \* Lyon BJI study group

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