Corynebacterium bone and joint infection (BJI)
A retrospective cohort from a BJI reference center

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Method

• Retrospective cohort study in a tertiary hospital reference center (CRIOAc Lyon, France) between 2007 and 2016
• Including All patients presenting a proven Corynebacterium BJI:
  ✓ ≥ 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

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%
Osseosynthesis: 60.5%
Superinfection: 47%

MICROBIOLOGY

Corynebacterium species

C. striatum+++ Coagulase negative staphilococci+++ Few comorbidities...
Majority of trauma

FOLLOW UP AND TREATMENT

Median follow-up: 38 weeks

FOLLOW UP AND TREATMENT

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%
Combination therapy duration: 13 weeks (IQR, 7-17)

FAILURE RISK FACTORS

20 failures
39.2%
14 documented
4 with Corynebacterium (8%)

DAPTOMYCIN IN FIRST LINE

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

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?


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