CIERNY AND MADER STAGE III ADULT LONG BONE CHRONIC OSTEOMYELITIS: RETROSPECTIVE STUDY AT THE LYON REFERENCE CENTRE FOR COMPLEX OSTEOARTICULAR INFECTIONS (CRIOAC)

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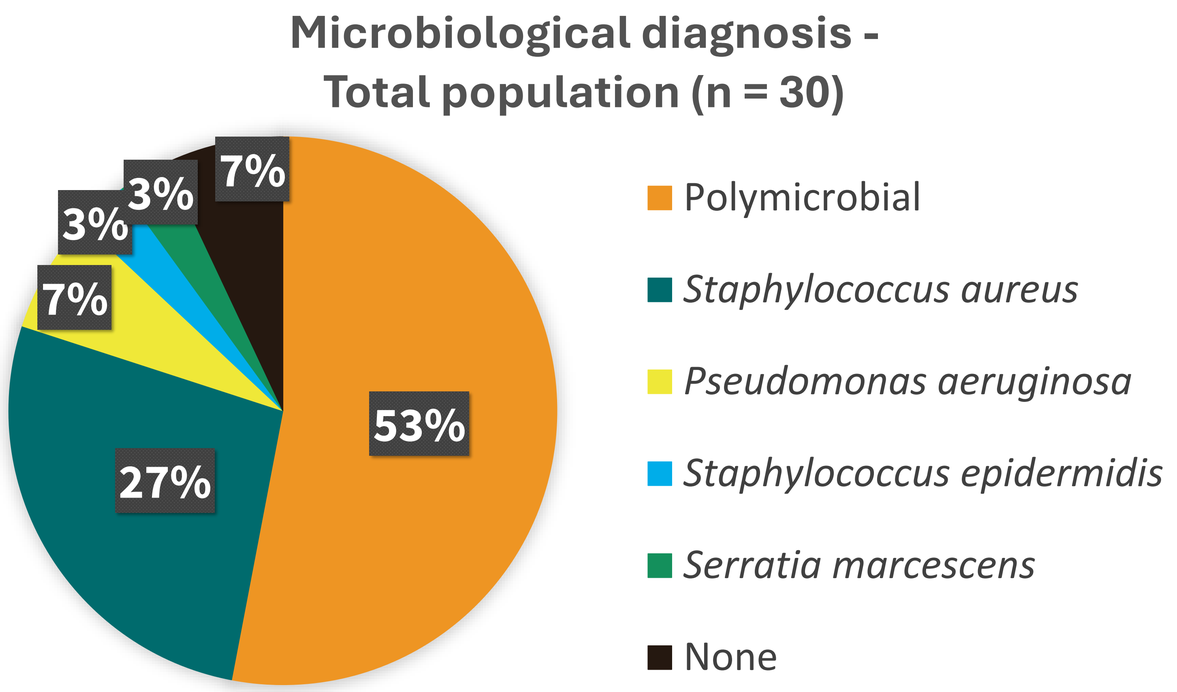
Introduction:

- Chronic osteomyelitis: patient's functional prognosis
- Standard treatment: therapeutic failure 15 to 22%
- Bone defect: risk factor for recurrent infection
- Development of local treatments: a bone substitute composed of calcium sulfate and hydroxyapatite impregnated with antibiotics seems likely to improve the chances of therapeutic success based on the first data published in the literature.

Aim: To characterize the population, microbiological data and overall therapeutic success of patients treated for stage III chronic long bone osteomyelitis, whether or not they received this bone graft substitute at the CRIOAc in Lyon.

Method:

- Retrospective, non-comparative study
- Lyon CRIOAc, over the period 2017-2021
- Adult patients with medico-surgical management of Cierny and Mader stage III chronic long bone osteomyelitis



Results:

83% - 17%

Population, n = 30

Median data:
- Age: 45.5 (33.3;60)
- BMI: 25.4 (22.1;29.9)
- ASA score: 2 (1;2)

Osteomyelitis:

- Complex (BACH), 90%
- Post traumatic, 60%
- Lower limb, 93% (tibia 50%)

Bone substitute, n = 8 (27%)

- Succes 87% (7/8)
- 1 microbiological failure
- 3 discharges due to liquefaction (37%)

Medico-surgical management, n = 30

- Cortical window median surface, 4cm^2
- Probabilistic antibiotic therapy effective in 100% of cases

Outcome, n = 30

- Median follow up: 794 days
- Success 73% (22/30)

Conclusion:

According to the results of our study and those reported in the literature on stage III chronic osteomyelitis, the reference treatment is associated with a non-negligible risk of infectious recurrence. The additional use of an antibiotic-impregnated calcium sulfate and hydroxyapatite bone graft substitute in these infections appears to be well tolerated and may increase the chances of therapeutic success. However, these data need to be confirmed in a prospective, multicentre, randomized clinical trial that is ongoing in France (Conviction Study NCT04805164).