The Challenge of Knee Periprosthetic Joint Infection

- A Two-Year Single-Center Experience -

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INTRODUCTION & AIM

Knee PJI is a complex complication with substantial morbidity.

We aimed to characterize patient profiles, microbiology, management, and outcomes in a secondary care hospital.

METHODS

Two-year retrospective single-center study.

Clinical, microbiological, surgical, and antibiotic data were collected and PJI classified according to EBJIS 2021 criteria.

RESULTS

Patient Profile

- 29 patients
- Mean age 72.5 years [58 - 87]
- 48% ♀ 52% ♂
- Functionally independent 83%
- ≥ 4 comorbidities 93.8%

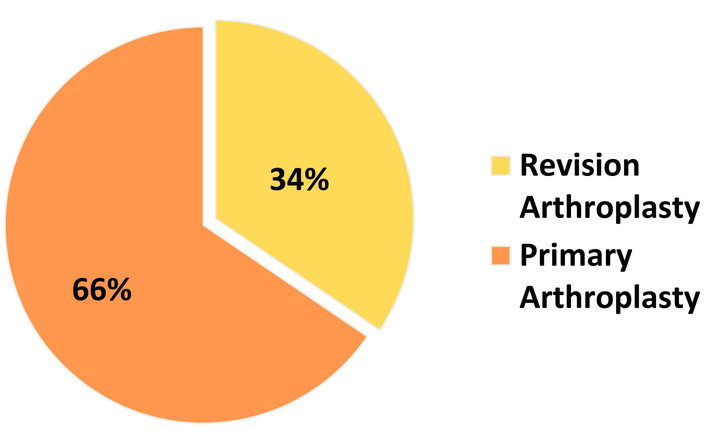
Most Frequent Comorbidities

• Hypertension	89.7 %
• Obesity	69.0 %
• Type 2 diabetes	34.5 %
• ASA III	58,6 %

Clinical / Laboratory Findings

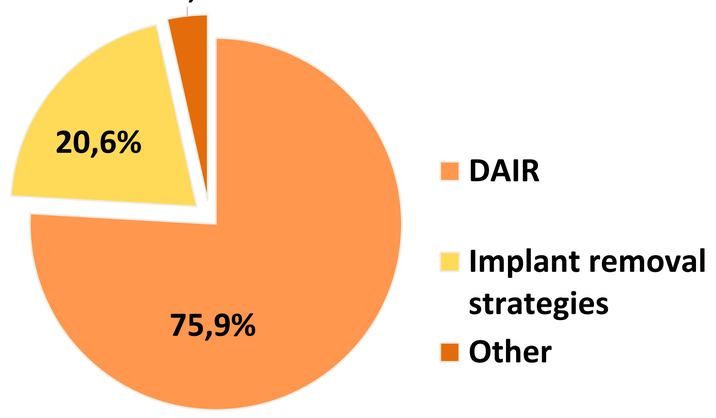
• Joint pain	96.6 %
• Local inflammatory	79.3 %
• Elevated CRP	75.9 %
• Mean ESR	67 mm/h

Arthroplasty Type / Time to Infection



- Mean time to infection was 4 years with early onset infection occurring in 17.2% of cases [total infection rate of 0.6%]

Surgical Management



- Local antibiotic carriers (vancomycin + gentamycin) applied in >50 % of cases

Microbiology

• *Staph. epidermidis*	34.5 %
• *Staph. aureus* (MSSA)	17.2 %
• *Enterococcus faecalis*	13.9 %
• Other microorganisms	24.1 %
• Multidrug-resistant isolates	10.3 %
• Arthrocentesis performed	34.4 %

ANTIBIOTIC THERAPY

Empirical (most frequent)	Piperacillin/tazobactam + Vancomycin (68.9 %) (mean duration of 10.3 days)
Targeted (most frequent)	Flucloxacillin (27.6 %) (mean duration of 9 weeks)
Outpatient (most frequent)	Trimethoprim-sulfamethoxazole (24.1 %)

- Rifampicin was utilized in 30 % of all cases
- Long-term suppressive therapy was utilized in 6.9 % of all cases

OUTCOMES

Confirmed PJI	**vs**	**Probable PJI**
79.3 %		20.7 %

• Overall treatment success	75.8 %
• Need for reoperation	13.8 %
• Recurrence	10.3 %
• Mortality at 30 days and 1 year	3.4 %

CONCLUSIONS

Elderly, highly comorbid, patients predominated. ***Staphylococcus* spp**. were the main pathogens and **DAIR** the leading strategy, with **75.8% treatment success**. Early diagnosis and multidisciplinary care are key to improving outcomes.