A Single Centre Experience of Prosthetic Joint Infections (PJI) Management and Outcomes with Outpatient Parenteral Antimicrobial Therapy (OPAT)

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Background and Aims

Treatment of prosthetic joint infections (PJIs) usually involves surgical intervention and long-term antimicrobial therapy which is increasingly being facilitated by outpatient parenteral antimicrobial therapy (OPAT) program for suitable patients. The aim of this study was to assess the clinical outcomes, readmission rates and bed days saved for these subjects.

Methods

- Retrospective chart review was undertaken for PJIs managed via OPAT between 2015-2020
- Data was collected after local ethics committee approval in line with GDPR
- Data analysis was performed using IBM-SPSS

RESULTS

Table 1: Patient Demographics

Gender	Male: 31 (75.6%), Female: 10 (24.4%)
Age	Median: 71.6 (24.9-91.1)
Median OPAT duration	32 days (5-53)
Bed days saved	1127 bed days saved, estimated saving of €963,585
Readmission rate	14 cases (34%)

Figure 1: Infection outcome

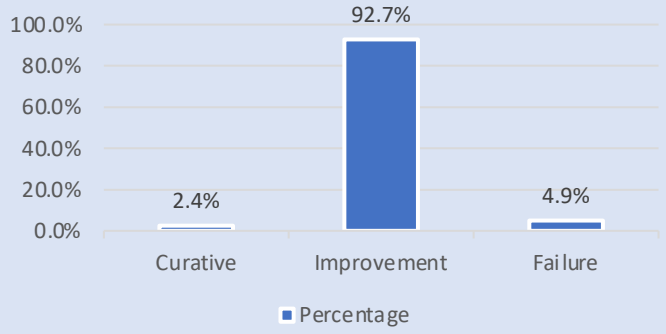


Figure 2: Readmissions

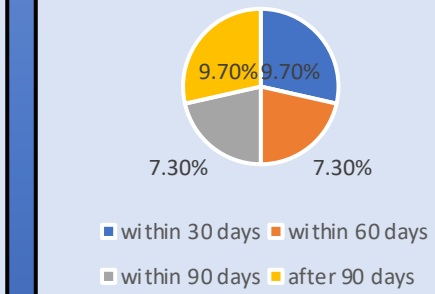


Figure 3: Reason for readmission

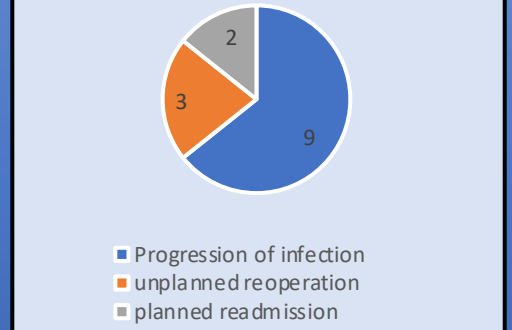


Figure 4: Pathogenic organisms

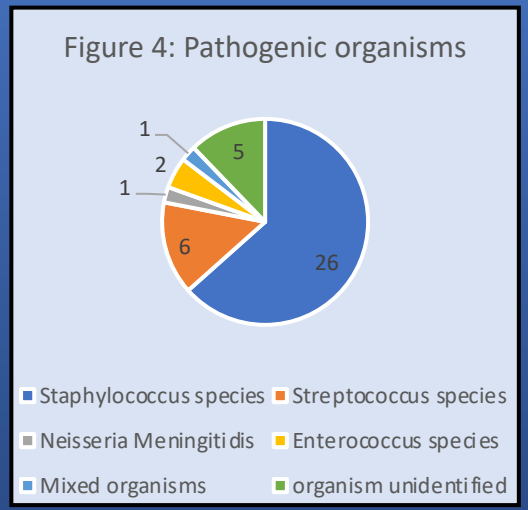
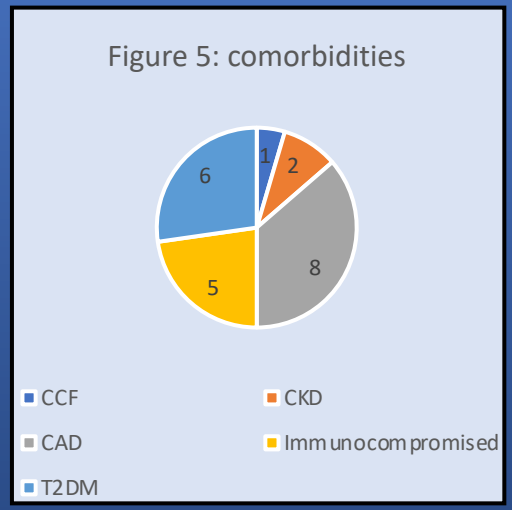


Figure 5: comorbidities



Conclusion

The overall readmission rate in this study is comparable to international data looking at PJIs[1], however is above the Irish national target of <5% for all OPAT discharges[2]. Majority of readmissions were related to primary infection n= 26 (64.3%) in this cohort and not OPAT-specific complications. The data indicates that PJI can be safely managed via OPAT. Our study also points to Type 2 Diabetes Mellitus as a factor associated with readmission. Larger studies on these patients are needed to further assess and optimise the factors associated with readmissions and treatment failures.

After adjustment for age and gender, Type 2 Diabetes Mellitus (T2DM) was associated with unplanned readmission (OR 8.5 (CI 95% 1.1-67.6))

References

1. all SGe. Patients With Prosthetic Joint Infections Receiving Outpatient Parenteral Antimicrobial Therapy: Characteristics and Readmission Rates. Brown University: Brown University; 2018.

2. Eileen Sweeney NC, Eoghan DeBarra , Karen Burns , Eoghan O'Neill , Eoin Feeney ,Helen Tuite , Arthur Jackson , Patrick Gavin , Susan Clarke , Sarah O'Connell , Eavan G Muldoon. Irish National Guidelines on the Provision of Outpatient Parenteral Antimicrobial Therapy (OPAT). National OPAT working Group; 2019.

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