

How should we manage prosthetic joint infection after knee arthroplasty during COVID-19 period? A pilot study of a new local strategy to improve management plan and length of stay during the crisis

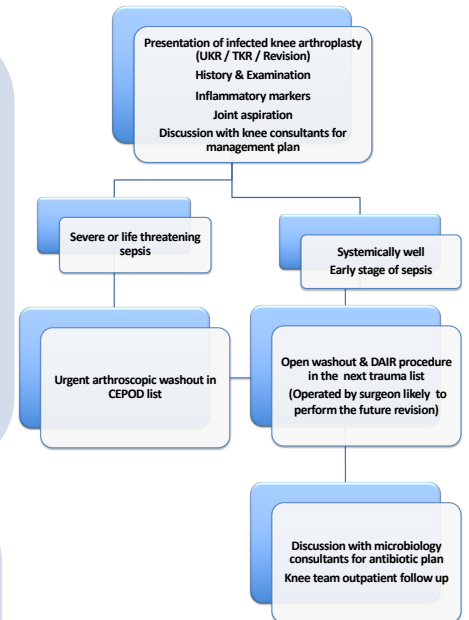
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Background

- Prosthetic joint infection (PJI) is one of the major complications after knee arthroplasty. Patients with PJI after knee arthroplasty often require a long period of hospital stay for surgical and antibiotic management.
- During COVID-19 challenging period, the length of admission ideally should be minimised to prevent inpatient viral transmission.
- A new local PJI management strategy for knee arthroplasty has been introduced just before COVID-19 period, which standardizes the initial admission investigation, early knee specialist consultation with an early surgical decision of open washout, DAIR procedures, and following with long term antibiotic and potential future revision plan.
- This study aims to compare the management and length of stay of patients with PJI following knee arthroplasty before and during COVID period in Royal Cornwall Hospital.

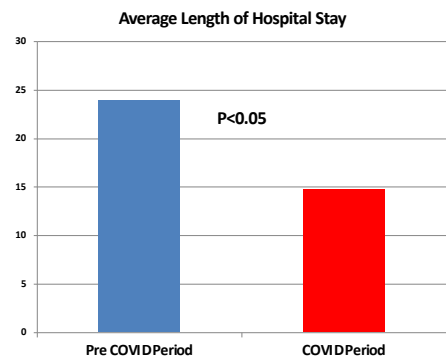
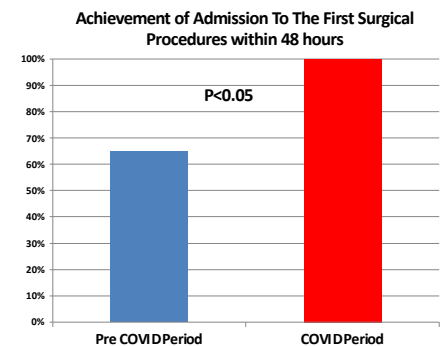


Method

- A retrospective review of management and length of stay of patients with PJI after knee arthroplasty over 1 year (January 2019 to December 2019) and COVID-19 period (March 2020 to July 2020).
- The study data were audited from hospital electronic database.
- 27 patients with PJI after knee arthroplasty before COVID-19 period were audited while 5 patients were audited during COVID-19 period.

Results

- All patients under the new protocol had 100% documentation rate of surgical management plan from knee team and antibiotic plan from microbiology team.
- The achievement of time from admission to the first surgical procedures within 48 hours improves from significantly improved from 65% pre-COVID-19 period to 100% during COVID-19 period. (P<0.05)
- The average length of hospital stay significantly reduced from 24 days pre-COVID-19 period to 14.9 days during COVID-19. (P<0.05)



Conclusion

- The new local pathway demonstrates the advantage of a more decisive management plan and minimises the length of admission.
- This pilot study snapshots the outcome of the new PJI management protocol during COVID-19 period and further study for the post-COVID-19 period will be beneficial to draw a long-term conclusion.

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