

DAIR or Double DAIR?

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INTRODUCTION:

Acute prosthetic joint infection is infection of prosthetic joint within 3-6 weeks from the surgery. The most ideal aim in treating PJI is retaining the implant with complete eradication of the infection. Debridement, antibiotics and implant retention (DAIR) is a procedure where the joint is debrided while retaining the components with incorporation of systemic antibiotics. However, it was associated with poor outcomes reported in literatures, thus, repeated debridement, antibiotics and implant retention within a timeframe (Double DAIR) is found to have higher success rate procedure in eradicating PJI. In our case report, it determines that Double DAIR procedure is a procedure that offers good infection control in acute PJI and comparable to revision arthroplasty surgery which may impose more morbidities with implant exchange and higher failure rates due to iatrogenic bone loss and recurrent infection.

REPORT:

This is a case of an acute left knee prosthetic joint infection which was referred from an outskirt hospital to our center, Hospital Selayang.

She is a 64 year old lady, who presented to us at week 4 post left total knee arthroplasty. She developed acute painful swelling of the left knee associated with fever. No significant history of trauma neither infection prior presentation.

Upon presentation to, the left knee appeared swollen, erythematous skin, pain on knee motion, generalized knee tenderness. The left knee passive range of motion is 20-45 degrees. Joint aspirate revealed gram positive cocci in clusters.

She was arranged for 1st DAIR emergently. Intraoperatively, purulent collection

intraarticularly with hypertrophic synovium. Total synovectomy and washout done with the modular part (tibial PE insert) exchange done. IV cloxacillin was started postoperatively. Tissue and synovial fluid cultures sent revealed streptococcus agalactiae. She underwent 2nd DAIR at day 6 post operatively. Intraoperative findings, healthy knee joint capsule, no signs of infection seen. Tissue and synovial fluid cultures sent revealed no bacterial growth.



Fig 1:
2nd DAIR
procedure after
day 6 of 1st stage
procedure. No
signs of infection
seen.

CONCLUSION:

Double DAIR procedure is a procedure that offers good infection control in PJI and comparable to revision arthroplasty surgery which may impose more morbidities with implant exchange and higher failure rates due to iatrogenic bone loss and recurrent infection.

REFERENCES:

1. The Double DAIR: A 2-Stage Debridement with Prosthesis-Retention Protocol for Acute Periprosthetic Joint Infections, McQuivey, Kade S. MD; Bingham, Joshua MD; Chung, Andrew DO; Clarke, Henry MD; Schwartz, Adam MD; Pollock, Jordan R. BS; Beauchamp, Christopher MD; Spanghel, Mark J. MD