

Vancomycin Loaded Bone Cement Bullet For Treatment Of Septic Arthritis Post ACL Reconstruction Surgery

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INTRODUCTION:

Septic arthritis Post Anterior Cruciate Ligament (ACL) reconstruction is one of which many surgeons strive to reduce.

CASE REPORT:

A 34yr old gentleman had ACL reconstruction surgery with hamstring graft done in January 2016 complicated with septic arthritis at day 10 post surgery. Left knee arthroscopic debridement with graft removal, insertion of Vancomycin bone cement bullet into femoral and tibia bone tunnel. Post operatively patient was put on knee brace locked in extension. Post operative X-rays as shown in figure 1.

Patient allowed home with oral Cloxacillin. Planned for cement bullet removal and bone grafting at 6 weeks post debridement before ACL reconstruction surgery.

DISCUSSION:

Septic arthritis post ACL reconstruction is managed by early arthroscopic debridement and washout followed by a regime of antibiotic for 4 to 6 weeks (Calvo et al., 2014). Depending on severity of infection, graft removal may be justified to eradicate infection.

Common organisms:

- *Staphylococcus aureus* (31%)
- *Staphylococcus epidermidis* (13%).

Local Vancomycin administration to ACL graft:

- significantly reduce postoperative infection rate (Eriksson & Karlsson, 2016), (Amerstorfer et al., 2017).
- synergistic bactericidal effect with Aminoglycosides (Masuda et al., 2017)

CONCLUSION:

Septic arthritis post ACL reconstruction is rare but devastating. Vancomycin and Gentamycin loaded cement bullet inserted into femur and tibia tunnel is effective in delivering high concentration Vancomycin locally to treat the

infection and avoid complication associated with intravenous use.



Figure 1: Vancomycin cement bullet insertion to tibia bone tunnel with Post operative Left knee X-rays showing position of Vancomycin cement bullet positions.

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