

CEFAZOLIN-INDUCED NEUTROPENIA CAUSING STREPTOCOCCUS MITIS SEPSIS IN PATIENT UNDERGOING TREATMENT FOR PROSTHETIC JOINT INFECTION

Samuel John Jebasingam Issace¹, Fahrudin Che Hamzah¹, Khairil Anwar Ahmad Hanif¹

¹Hospital Pengajar Universiti Putra Malaysia

Introduction: Treatment of prosthetic joint infection (PJI) involves long-term administration of systemic antibiotics. Ironically, the antibiotics itself can be harmful due to its adverse effect. We reported a case of PJI of the knee with *Staphylococcus Aureus* which was treated with intravenous (IV) Cefazolin. In the course of treatment, the patient developed neutropenic sepsis due to *Streptococcus Mitis*. Although bacteremia cause by *Streptococcus Mitis* in neutropenic patients had been described, the occurrence of cefazolin-induced neutropenia in the literatures are sparse. This is a first reported case in which a patient treated for PJI with IV Cefazolin subsequently developed neutropenia and sepsis by *Streptococcus Mitis*.

Discussion: 71-years-old female with history of right total knee arthroplasty done 3 years ago, admitted for a suspected acute PJI. The initial Absolute Neutrophil Count (ANC) was 8.54×10^9 cells/L. She underwent debridement with retention of implant. The cultures taken was positive for *Staphylococcus Aureus*. She was started on IV Cefazolin 2g 8hrly. At day 24 of IV Cefazolin, she developed 2 spikes of temperature. However, the right knee was lacking for symptoms and signs of reinfection. The ANC dropped to 0.76×10^9 cells/L. Blood culture was taken and *Streptococcus Mitis* was isolated. IV Cefazolin was discontinued and base on sensitivity, IV Ceftriaxone 1g 12hrly was started and given for 3 weeks. The neutropenia resolved and repeated blood culture was negative. Upon discharge, the ANC was 7.85×10^9 cells/L. She continued with oral combinations of ciprofloxacin and sulfamethoxazole/trimethoprim for 3 months. Up to date, she remained infection free for more than a year.

Conclusion: Cefazolin-induced neutropenia is rare. This case demonstrated that in the course of treatment for PJI with IV Cefazolin, the patient developed neutropenic sepsis with an opportunistic organism. The neutropenia resolved after cessation of the antibiotic.