

Case Report

Coagulase-negative staphylococci (CoNS) periprosthetic joint infection in a patient with ca breast -a case report

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1. INTRODUCTION

The prevalence of PJI in primary hip and knee procedures is estimated to be between 0.5% and 3% [1]. Coagulase-negative staphylococci (CoNS) are biofilm-producing pathogens whose role in periprosthetic joint infection (PJI) is increasing. These are a heterogeneous group of microorganisms that do not promote blood clot formation because, unlike *Staphylococcus aureus*, they do not produce the enzyme coagulase [2]. CoNS was classically grouped together to distinguish it from *S. aureus* and because they were considered to be less pathogenic [3]. Subsequently, they have been identified as one of the most common causes of PJI, with a reported incidence that is increasing [4, 5, 6]. In addition, there is increasing evidence of mutability, antibiotic resistance, and robust biofilm production by this bacterial class [7].

Two-stage arthroplasty, with the use of an antibiotic cement spacer, is an effective means of managing periprosthetic joint infections.

2. MATERIALS AND METHODS

A 55 year female patient came in opd with c/o- pain in left hip, difficulty in walking. h/o- femur neck fracture 10 months back operated elsewhere. k/c/o- ca breast on treatment. o/e- left hip range of motion was painful and restricted.

Radiological investigation-xray pelvis both hip Ap and lat views, blood investigation-preop profile, esr and crp levels were done.



Fig 1. This was the xray when patient visited for the first time, Uncemented Austin moore prosthesis left hip, no osteolysis seen



Fig 2. She got operated for fracture of in sep 2021

Pre op profile showed decreased hb, elevated crp-40mg/l, esr-56mm/hr, rise in neutrophils-85%.

This patient comes under chronic PJI as per MSIS criteria.

The report supports my treatment protocol, a low virulent coagulase negative staphylococcus infection with heavy growth was found. On opening the joint, unhealthy granulation was found and a bit of pus and the prosthesis was loose, after its removal, I decided to go for a 2 stage surgery.

As a cement spacer-a smaller Austin moore prosthesis was taken and coated with cement and a wire mesh to support it, 2 g vancomycin was used

Figure 2
Two Stage Exchange for Treatment of Prosthetic Joint Infection

Prosthesis loose; Resistant organism. Moderate to severe tissue damage. Sinus tract joint to skin.

Debride and remove device. Place antibiotic impregnated spacer if susceptible organism. No spacer placed if resistant organism. Intravenous antibiotic therapy >4-6 weeks

Assess infection status before reimplantation; hiatus varies with pathogen and joint. Insert prosthesis if infection appears eradicated.

Treat 4 - 6 weeks with pathogen specific IV antibiotic(s). Rifampin not recommended as device is out. Usually have 2-8 week off therapy observation before reimplant. Follow ESR/CRP while off Rx . Reaspirate if suspicious for infection. Use of antibiotic spacer may help. At surgery get tissue for culture and frozen section or fixed histopathology



Cement spacer removed



Before going for second stage surgery, crp levels were normal

Dual mobility total hip replacement was done along with absorbable antibiotic beads (stimulan).



Immediate post op xray



4 months post op xray

3. RESULTS

Complete irradiation of infection, patient is walking comfortably with no pain.

4. CONCLUSION

Early diagnosis and aggressive management helps in eradication of PJI and gives good functional results. Use of absorbable antibiotic beads prevents another biofilm formation on the spacer. Single stage or 2 stage procedure can be performed according to the virulence of organism and host factors.

5. REFERENCES

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