

Use of Cefuroxime in Treatment of Methicillin Sensitive *Staphylococcus Aureus* in Haemodialysis Patient – A Single Centre Experience

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Introduction

- Infection is one of the most common causes of mortality in haemodialysis patient especially in patients who dialyse via catheter¹.
- It is common practice to use Vancomycin in management of Methicillin sensitive *Staphylococcus aureus* (MSSA) infection because of the broad-spectrum cover and convenience of administration in haemodialysis patients³.
- Flucloxacillin is an effective alternative but q.i.d. dosing poses compliance problem.
- Use of Vancomycin however is associated with number of limitations.
- The incidence of Vancomycin resistant Enterococcus (VRE) is on the rise². In our centre 10 patients with VRE were reported in last 12 months. It is less bactericidal compared with the cephalosporins and penicillins. Close monitoring of levels is required to prevent toxicity.
- Cefuroxime, a second generation Cephalosporin is effective against MSSA and offers advantage over Vancomycin as above.

Methods

- We used intravenous Cefuroxime; 1.5 grams given at the end of each dialysis session for a period of four weeks in patients with MSSA infection in haemodialysis patients.
- Root cause analysis and appropriate investigations were done for all the patients with MSSA infection to exclude other potential sources of infection apart from dialysis catheter.
- Repeat blood cultures and exit site swab were taken following treatment to exclude ongoing bacteraemia.
- Ten patients were diagnosed with MSSA infection between December 2009 to March 2013.
- They were dialysing with tunnelled dialysis catheter.
- All the patients were treated with cefuroxime after excluding penicillin allergy.

Results

- None of the 10 patients, who were treated with Cefuroxime, relapsed following completion of the course of treatment.
- The mean follow up period was 398 days.

Conclusions

- In this study Cefuroxime appears to be safe and effective alternative in management of MSSA infection in haemodialysis patients.
- First generation cephalosporin (cefazolin) has been used successfully³, use of second generation cefuroxime has not been reported before.
- Although small number of patients were treated with cefuroxime, unlike cefazolin, we did not find any treatment failure and it may be superior to 1st generation cephalosporins.

Limitation

Our study has small number of patients however we are proactive with 'fistula first' policy and incidence of catheter associated infections are very low in our centre. Further large studies are recommended.

Reference:

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