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# VANCOMYCIN INDUCED RASHES -A CASE SERIES REPORT

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***ABSTRACT:***

***Vancomycin is a bacterial antibiotic used against resistant strains of streptococcus and staphylococcus, and one of the higher antibiotics to be used in treatment for the infections occurred in heart valve disease and in severe sepsis patients above 60 years .The main of the study is to determine the major clinical side effects of the vancomycin. It was a open label prospective and retrospective study. Among the 170 vancomycin injection received patients in the hospital with same brand, dose and frequency (1gm IV slow infusion) seventeen patients was observed with rashes over the neck and upper lymph. It is known as Red Man Syndrome or Dress Syndrome. In this study one patient associated with anaemia the dosing interval changed to prevent severe anaemia and another patient the drug was stopped because of severe reaction. The test dosing (10 microgram/ml) concept can be introduced before the administration of routine dose to minimize the clinical side effects. The treatment with antibiotic (linezolid or tigecycline) can be used as alternative.***

***Key words:*** ***Vancomycin, Central vein, Red man syndrome, Rashes, Dose adjustment.***

## 1. INTRODUCTION

Vancomycin is a antibiotic against resistant strains of streptococcus and staphylococcus. It is used to treat infection of intestines caused by clostridium difficile, which can cause watery or bloody diarrhoea [1].Additionally it is used in treatment of staph infections that causes inflammation of the colon and small intestines. Oral vancomycin works only in intestines and not as effective in other infections [2]. An injection form is used to treat serious infections in other parts of the body. Some of the major side effects include rashes in the site of administration and upper lymph

near neck more over long time side effect of this vancomycin include hearing loss [3]. In pregnancy category it is not known if vancomycin harms the baby or not and the study is still in process to prove its safety [4]. It also passes into the breast milk and may harm a nursing baby [5].In kidney failure patients it should be used with caution as it may worsen the condition of renal failure [6].The main objective of the study is to know more about the major clinical side effects of vancomycin induced rashes [7].

## 2. MATERIALS AND METHODS:

### 2.1 STUDY SITE & STUDY POPULATION:

The study was conducted in a 900 beded multispeciality hospital. The study population included the adult patients who were using vancomycin in their treatment. Study population also includes only the patients taking injection form of the drug vancomycin in their treatment. Pregnancy women, paediatric patients were in exclusion criteria[8].

### 2.2 STUDY DESIGN:-

This study is designed under both retrospective & prospective study. The patients using vancomycin injection in the year of 2015 were included in the study .A data collection form was designed with the Inclusion of complete blood count, Renal Parameters &Physical Observation of Erythema.[9]

We have screened the patients using vancomycin for the clinical side effects. Study protocol was prepared and submitted to the IHEC.after ethical approval, patients using vancomycin was screened for clinical side effects and data was recorded.

## 3. RESULTS:

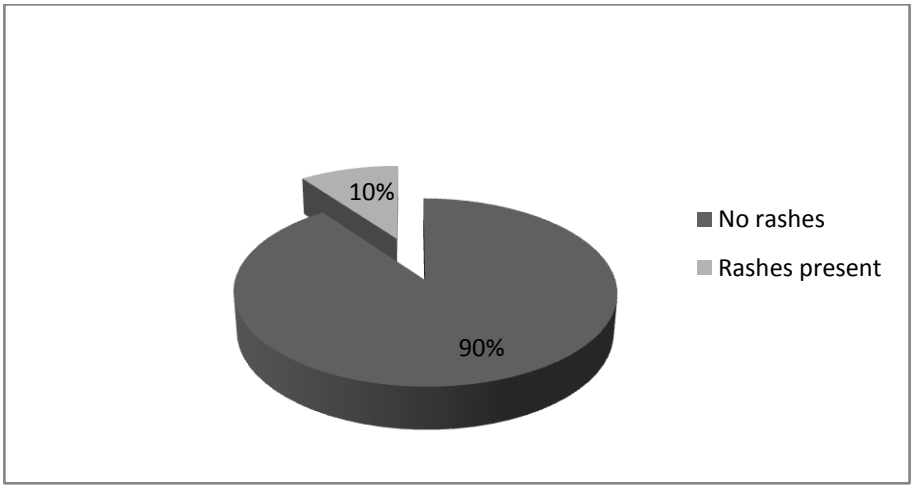
### 3.1 TOTAL NUMBER OF PRESCRIPTION SCREENED:

During the study period 170 patients was treated with vancomycin. Out of that 17 patients had rashes around their neck and upper lymph.

**Table 1: Details of Patients in the study**

| SL.NO | CATEGORY | No Of Patient |
|---|---|---|
| 1 | Total No of patients screened | 170 |
| 2 | Patients observed with ADR | 17 |

**FIGURE-1 Percentage Presence and Absence of ADR**




## 4. DISCUSSION:

The Red Man Syndrome effect due to vancomycin was observed in 10% of the patients (Fig 2) taking 1gm IV slow infusion but literature reports state 47.9 % [10] .The infusion in central vein is the major reason for the red man syndrome. The drug usage and its time interval was altered on the basis of the severity monitoring of the patient and the biological half life of vancomycin[11]. The patients who are sensitive to drug by nature and genetically will show the side effects of red man syndrome.

**FIGURE 2:- Patient With Red Man Syndrome**

Steroids can be used for the management of red man syndrome. Parenteral vancomycin can be changed to oral route of administration[12]. Niranjo ADR assessment scale confirms the ADR was found to be a definite ADR and the

score was found to be 9. Vancomycin showed the adverse reaction and once the drug was withdrawn it was stopped and when the drug was exposed again it reappeared

## 5. CONCLUSION:

The test dosing (10 microgram/ml) concept can be introduced before the administration of routine dose to minimize the clinical side effects of vancomycin[13]. The treatment with antibiotic (linezolid or tigecycline) can be used as alternative [14]. We can minimise this ADR by giving the next dose of vancomycin after its half life period[15].

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## 7. AUTHORS CONTIBUTION:

Work plan: Veintramuthu Sankar; Data collection, Analysis and interpretation, Writing the article Statistical analysis- S.M.Vithunes, Final approval of the article, Overall responsibility: Veintramuthu Sankar.

## 8. CONFLICTS OF INTEREST:

The authors declare no conflict of interest.

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