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Case Report

Vancomycin Induced Exanthem- A Case Report

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ABSTRACT

Exanthem is a skin eruption, as a prominent manifestation accompanying certain infectious diseases. It is an acute, short lived, viral disease of infants and young children characterized by high fever at onset that drops to normal after 3-4 days and concomitant appearance of a maculo popular rash that appears first on trunk and then spreads to other areas. Exanthem is widely spread out rash which is caused due to underlying diseases, heat rash, sun burn, toxins, viruses and medication side effects. It is one of the major side effects associated with the use of parenteral Vancomycin especially in the department of Pediatrics.

Vancomycin is an antibiotic used to treat number of bacterial infections. It is complex tricyclic glycopeptide antibiotic obtained from Nocardia species Amycolatopsis orientalis. Vancomycin has strong bactericidal activity against a broad range of gram positive bacteria. With the increase in vancomycin use, adverse drug reactions (ADRs) associated with vancomycin have been reported increasingly more often. However, the characteristics of cutaneous ADRs with and without systemic reactions (SRs) have not been described.

We are reporting a case of 3 months old male child with complaints of fever which is continuous in nature, improper feed intake and continuous crying. The child was diagnosed as a case of SEPSIS based on laboratory data. During the course of treatment the child developed exanthem after administration of parenteral Vancomycin. So Vancomycin was withdrawn and alternatively parenteral Taxim and Calamine and Diphenhydramine HCL lotion was prescribed to treat Exanthem.

***Key Words*:** Vancomycin, Exanthem, Sepsis

INTRODUCTION

Adverse drug reactions affecting skin are common and present with a diverse pattern of expressions. Cutaneous hypersensitivity reactions range in severity, from mild reaction to severe cutaneous adverse reactions. [1] Exanthem is a skin eruption, as a prominent manifestation accompanying certain infectious diseases. Exanthem is a wide spread non specific skin rash commonly characterized by generalized eruption of erythematous macules and popular lesions. It is an acute, short lived, viral disease of infants and young children characterized by high fever at onset that drops to normal after 3-4 days and concomitant appearance of a macula popular rash that appears first on trunk and then spreads to other areas. This condition can be treated with antibiotics, calamine lotion, anti virals. [2]

Vancomycin is an antibiotic used to treat number of bacterial infections. It is complex tricyclic glycopeptide antibiotic obtained from Nocardia species Amycolatopsis orientalis. It is recommended intravenously as a treatment for complicated blood stream infections (sepsis), endocarditis, skin infections and meningitis caused by several bacteria. As it

has strong bactericidal activity against a broad range of gram positive bacteria, it has been used for more than 50 years and is the drug of choice for treatment of infections due to methicillin resistant staphylococcus aureus, corynebacterium jeikeium, resistant species of streptococcus pneumoniae and pseudomembranous colitis. [3] Blood levels may be measured to determine correct dose. With the increase in vancomycin use, adverse drug reactions (ADRs) associated with vancomycin have been reported increasingly more often. However, the characteristics of cutaneous ADRs with and without systemic reactions (SRs) have not been described. [4]

The main adverse effects associated with vancomycin are histamine like reactions commonly seen as flushing and maculopapular rash of the face, neck, upper thorax, back and arms. And other adverse effects include nephrotoxicity, ototoxicity, haemotoxicity, and thrombophlebitis. [5]

CASE REPORT

A 3 months old male child with complaints of fever which is continuous in nature, improper feed intake and continuous crying. The child was diagnosed with SEPSIS and the child was treated with parenteral Vancomycin 100 mg in 20 ml NS slow IV over 1 hour for every 8th hourly in a day.

On physical examination temperature was found to be 99.8°F and on cutaneous examination the child developed purpuric spots over flexures and macular eruption over trunk and lower limbs.

On laboratory examination the blood profile reveals the following data. Haemoglobin-6.5 gm/dl; WBC-4700 cells/cu mm; RBC-2.91 million cells/cu mm; Platelet count-2.07 lakhs/cu mm; PCV-22.8 %; MCV-78.5 mcg; MCHb-22.5%; MCHb conc-28.7 %; Polymorphs-79%;Lymphocytes-16%; Esoinophils-4%; Monocytes-1%; Basophils-0%; ESR-25mm/hr; CRP-positive; Dengue test-negative. On urine analysis Albumin, sugars, bile pigment, ketone bodies were absent.

Upon laboratory investigation the child was diagnose as Sepsis. The treatment was started with antibiotics and supportive medications to control the infection.

On Day-I all the systems are normal and vitals include HR-120bpm, RR-64cpm and the child was treated with Inj. Ceftriaxone 250 mg IV BD, Inj. Amikacin 35 mg IV BD, Syp. Paracetamol 3ml (72mg) p/o TID, IVF Isolyte 15ml/hr.

On Day-II the child was treated with same medication as on day 1 and Inj. Piptaz 500 mg slow IV TID, Inj. Rantac 0.3 ml (7.5 mg) IV BD were added.

On Day-III urinary output was normal and flushing was present the child was treated with same medication and Inj. ceftriaxone was stopped and Inj. Vancomycin 100 mg in 20 ml NS slow IV over 1 hour for every 8 hours per day was prescribed.

On Day-IV the child had developed purpuric spots over flexures and macular eruption over trunk and lower limbs due to administration of vancomycin, so vancomycin and all medications were stopped. The child was referred to dermatology and the physician was diagnosed as drug induced exanthem, so the child was treated with Calamine and Diphenhydramine HCL lotion.

Fig: 1 showing exanthem on left lower limb of the child after administration of vancomycin.

On Day-V and Day-VI the child had fever and the child was treated with Inj. Taxim 250 mg IV 12 hrly, Calamine and Diphenhydramine HCL lotion, Inj. Rantac 0.3 ml (7.5 mg) IV BD, Syp. Paracetamol 3ml (72mg) p/o TID, Atarax drops 0.6 ml (3.6 mg) TID.

On Day-VII rashes were decreased and the child was discharged with Syp. Paracetamol 3ml (72mg) p/o sos, Atarax drops 0.6 ml (3.6 mg) TID, Trifer drops 0.3 ml (3 mg) p/o TID, Calamine and Diphenhydramine HCL lotion, Syp. Amoxiclav and asked to review after 10 days.

CONCLUSION

Here in this case we concluded that the occurrence of exanthem is due to administration of parenteral vancomycin with idiopathic mechanism. Thus we may suggest the administration of test dose of vancomycin before therapeutic dose in case of Sepsis in pediatrics in order to prevent certain adverse drug reactions.

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