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A Rare Case Report on Clindamycin Induced Angioedema with Stevens-Johnson Syndrome

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ABSTRACT

Antibiotics are one of the most important discoveries in medicine and are commonly used agents to treat various kinds of infections. But Adverse drug reactions (ADRs) caused by these agents is one of the major concern to the patient welfare. We here report a case of a 24- year-old female patient with H/O drug use (Cap. CLINDAMYCIN) for cellulitis, who later developed severe swelling and redness of eyelids, lips, eyes, rashes over the face and back. Later she was admitted in the Emergency Department, in a tertiary care hospital and further management has given to the patient. The reactions started subsiding after withdrawal of Clindamycin and administering i.v. Hydrocortisone 100mg stat followed by Inj.AVIL-25mg i.v. stat and Inj.XONE-1gm i.v. stat. The causality assessment was done as per WHO-UMC scale and Naranjo scale and it was "probable" in this case. Health care providers must be careful regarding the adverse effects of the drugs like STEVENS JOHNSON SYNDROME and ANGIOEDEMA which are potentially fatal conditions. The most commonly and widely prescribed drugs should also be used judiciously and continuously monitored to prevent such fatal adverse drug reactions.

INTRODUCTION

Modern day drug therapy for the control of pain has made great strides in the recent past. Nevertheless, adverse drug reactions, although rare, still remain a major threat to the patient welfare.[1]Antibiotics are one of the most commonly used agents to treat various kinds of infections, but adverse drug reactions caused by these agents is one of the major concern. Among all ADRS 75 to 80% are classified into type A (predictable) whereas 20-25% as type B (unpredictable) [2]. Clinically these ADRS could be cutaneous (maculopapular rashes, fixed drug reactions, exfoliative dermatitis and erythroderma), organ specific (hepatitis, interstitial nephritis, blood dyscrasias), systemic (drug induced hypersensitivity syndrome, anaphylaxis) or various combinations of these. Severe cutaneous ADRs such as Steven Johnson Syndrome (SJS), Toxic Epidermal Necrolysis (TEN), Acute Generalized Exanthematous Pustulosis (AGEP) could be life threatening.[2&3]

Clindamycin is a lincosamide antibiotic, it is highly active against streptococci, pneumococci (except enterococci) and staphylococci.**[4]** It is indicated for the treatment of skin and soft tissues infections and is rarely the drug of choice for either Gram positive or anaerobic infections, with the exceptions of severe streptococcal cellulitis/fasciitis, diabetic foot and anaerobic.[5&6]

Clindamycin can cause severe allergic skin reactions such as Stevens-Johnson syndrome, Angioedema and toxic epidermal necrolysis. Symptoms can include: Severe rash, peeling skin, swollen face or tongue and blisters on skin or blisters in or around nose, mouth, and eyes.[10]

Angioedema is of two types allergic and non-allergic.

1. Allergic angioedema is the most common type and includes reactions to foods such as peanuts and shellfish, medications including antibiotics, insect bites and stings, and latex.

2. Non allergic, drug-induced angioedema is caused by certain medicines including commonly prescribed anti hypertensive's (ACEI's).[8]

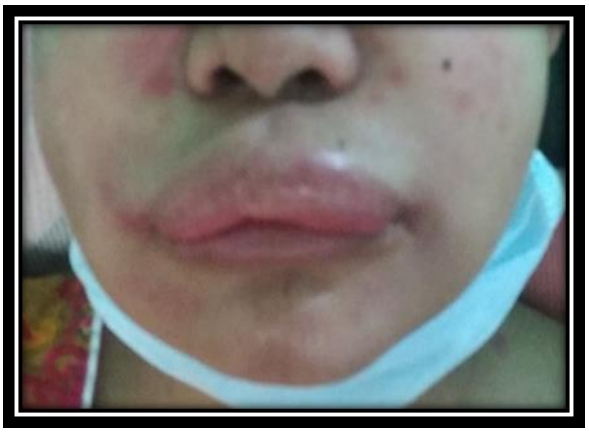
Drugs may induce two different types of angioedema; allergic and non-allergic angioedema. Drug induced allergic angioedema is a type I hypersensitivity and mediated by histamine. In type I hypersensitivity, the medication cross link with immunoglobulin E (IgE) antibody bound on the surface of mast cells which results in the release of histamine.[9]

Steven-Johnson Syndrome (SJS) is an infrequent but a severe form of immune complex mediated hypersensitivity reaction to drugs which typically involves the skin and the mucous membranes.[10]It is classically related to a medication hypersensitivity reaction; however, infectious etiologies are increasingly recognized as inciting agents.[11]The drugs that cause SJS commonly are antibacterials, anticonvulsants (phenytoin, phenobarbital, carbamazepine), non-steroidal anti-inflammatory drugs (Oxicam derivatives) and oxide inhibitors (Allopurinol).[10]

CASE REPORT

A 24 years female patient was admitted in the Department of Emergency Medicine, SVIMS HOSPITAL Tirupati on 25th Nov 2019 with the chief complaints of swelling and redness of lips, eyes and eyelids and rashes over the trunk. She is a known case of SLE with Lupus Nephritis class-IV and cellulitis since one month and was newly diagnosed with hypertension. She was under regular medication. On 24th Nov the patient was taken Cap. Clindamycin a dose of 300 mg for cellulites at local hospital. After taking first dose of Clindamycin she experienced anaphylactic reactions on face and trunk. The very next day (25th Nov 2019) she was referred to Tertiary Care Teaching Hospital Tirupati. Physical and cutaneous examinations were performed by the physician, Patient vitals were normal except BP-180/110mm of Hg. On Cutaneous examination, intense facial edema along with purpuric macules over periorbital region and upper trunk, arms & palms were observed and Gross edema of upper lip present. Based on physical and cutaneous examinations the physician diagnosed as drug induced (Clindamycin) SJ Syndrome with Angioedema. So the Physician treated with the following medications Inj. Hydrocortisone 100 mg IVSTAT, Inj. AVIL 25 mg IV stat, Inj. Adrenaline 1:1000 Units 0.5 ML IV STAT, Inj. XONE 1 gm IV STAT and Inj. PANTOP 40 mg IVSTAT, Foley's catheterization on the first day.

Swelling of eyelids



Lips

Skin rashes on body

Redness of eye

Figure No. 1: Patient condition before Treatment

On second day patient vitals were normal except BP 140/90 mm of Hg. On examination, the patient had oral erosions along with whitish coating of mucosa. So physician prescribed Clotrimazole cream (Mouth Paint), along with this instead of hydrocortisone, Inj.DECADRON was added then followed by Inj.AVIL, Tab.NEFITA-DS, Tab.CALCI and Tab.AMLOGARD. Tab.HYDROXYCHLOROQUINE was prescribed for Systemic Lupus Erythematosus.

On third day Patient vitals were normal expect BP 150/100 mm of Hg. Tongue bite(+), physician advised to continue the same medication as of day. On day 4& 5thPatient vitals were normal expect BP 170/100 mm of Hg. Patient had no fresh complaints hence same medication

was continued. On the same day, patient was referred to dermatology department in order to treat cutaneous reactions and physician removed Inj. Decadron from prescription and added Tab. Prednisolone 20 mg.

On day 5 to 10patient didn't experience any fresh complaints, and the reactions were started subsiding slowly with the treatment. Patient was stable and she was discharged with following medications.

Table No.1: Laboratory Parameters

S. No.	Laboratory Parameters	Day 1	DAY 2
1	Sr.Creatinine	3.2mg/dl	4.11mm/hg
2	Sr.Urea	3.1mg/dl	115mg/dl
3	Sr. Alkaline Phosphatase	265IU/L	-
4.	Hb	8.3gm/dl	9 gm/dl
5.	WBC	6700cells/cumm	6800cells/cumm.
6.	Neutrophil	81%	83%
7.	Eosinophil	1%	3%

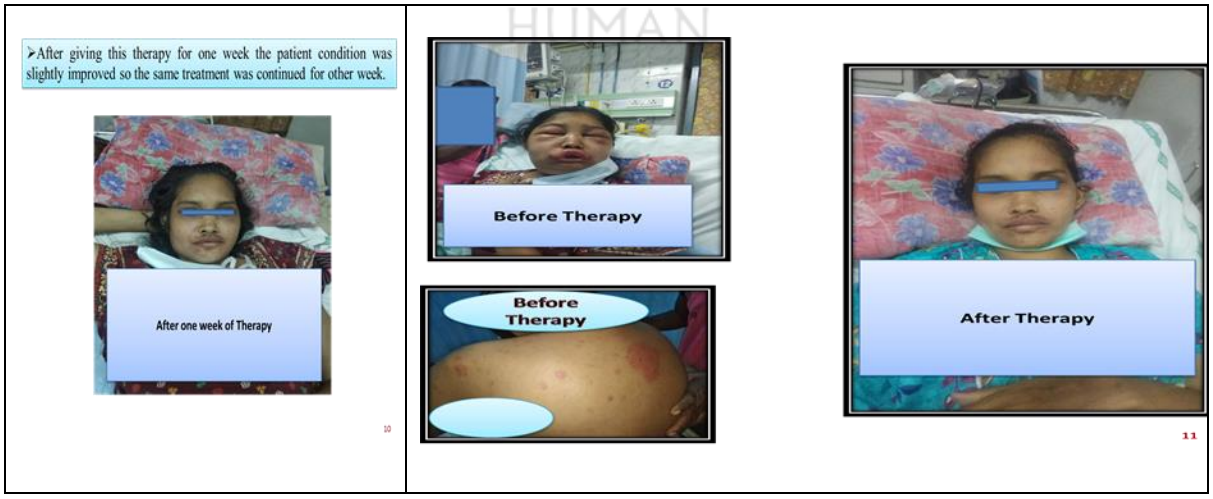


Figure No. 2: Patient Condition Before and After treatment

DISCUSSION

Adverse drug reactions affect upto 10% of the population, and in hospitalized patients, this figure increases up to 20%. Clindamycin is a Lincosamide antibiotic that inhibits bacterial protein synthesis it is approved for the treatment of Staphylococcal, Anaerobic, streptococcal

infections. It was found that Clindamycin shows prompt clinical and bacteriologic response. It has excellent tissue as well as bone penetration. Thus, there is increasing use of clindamycin in clinical practice to treat infections[a]. Hypersensitivity reactions with Clindamycin may be immediate/delayed type, but their frequency and severity are very rare. Although the incidence is rare, the physicians should be aware of such reactions before prescribing Clindamycin[b]. Physicians writing prescriptions for their patients must warn them about possible adverse effects[c]. Once the offending drug has been identified, the ultimate goal is to discontinue the drug.

CONCLUSION

Since new antibiotics are continuously introduced into clinical use, reactions to newer compounds are likely to increase in the near future. Health care providers must be careful regarding the adverse effects of the drugs especially STEVENS JOHNSON SYNDROME and ANGIOEDEMA which is potentially a fatal condition. The most commonly and widely prescribed drugs should also be used judiciously and continuously monitored to prevent such fatal adverse drug reactions. This report suggests that clinical providers should be aware of these severe reactions, hence use Evidence based algorithms to help determine medication causality and document the reaction clearly in the Electronic health record.

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