



CASE REPORT ON CARBAMAZEPINE INDUCED STEVENS JOHNSON SYNDROME IN TRIGEMINAL NEURALGIA

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ABSTRACT

Trigeminal neuralgia (TN or TGN) is a chronic pain disorder that affects the trigeminal nerve. The pain associated with trigeminal neuralgia represents an irritation of the nerve. The cause of the pain usually is due to contact between a healthy artery or vein and the trigeminal nerve at the base of the brain. This places pressure on the nerve as it enters the brain and causes the nerve to misfire. This intense, stabbing, electric shock-like pain is caused by irritation of the trigeminal nerve. The pain is intensely sharp, throbbing and shock-like and usually triggered by touching an area of the skin or by specific activities.^[1] Anticonvulsant drug and Muscle relaxant are the common class of drugs used in the treatment of Trigeminal neuralgia.^[1,2,9] A 65 years aged female patient attended OP with chief complaints of fever since 2 days and heavy rashes all over the body, skin blisters in the morning. She was on medication for Trigeminal neuralgia (carbamazepine 400 mg) since two days. Symptoms of STEVENS-JOHNSON SYNDROME were observed and it was found to be due to use of carbamazepine. With the advice of the physician the suspected drug was withdrawn and was replaced by Baclofen. Patient safety is essential in reporting the ADR's and analyzing the medication error. Adverse drug reactions are an important concept which leads to lethality of the patient.

KEYWORDS: Trigeminal neuralgia (TN or TGN), STEVENS-JOHNSON SYNDROME, Toxic epidermal Necrolysis, carbamazepine (Anticonvulsant), Baclofen (Muscle relaxant), Moderate (4b) type of reaction.

INTRODUCTION

Trigeminal (TN or TGN) neuralgia is associated with the pain due to contact between a healthy artery or vein and the trigeminal nerve at the base of the brain. Trigeminal neuralgia is a chronic pain disorder that affects the trigeminal nerve. It is a common disorder that occur to males and females. Most frequently affects individuals more than 50 years of age.^[1] Mostly anticonvulsants are used as first line drugs. Carbamazepine is the drug of choice for Trigeminal neuralgia.^[2,9] Its mechanism of action include binding preferentially to voltage gated sodium channel in their inactive conformation, which prevents repetitive and sustained firing of an action potential thus inhibiting ectopic discharges. Beside enhancing the decrease of nerve impulses that cause seizures and nerve pain it may lead to severe allergic reactions like Stevens-Johnson Syndrome.^[2,3,6,12] Stevens-Johnson Syndrome is a rare, serious disorder of skin and mucous membranes.^[7,4,5] Fever, Sore mouth and throat Fatigue, Cough and Burning eyes are the symptoms of Stevens-Johnson Syndrome.^[10,4]

CASE REPORT

A 65 years aged female patient attended OP with chief complaints of fever since 2 days and heavy rashes all over the body, skin blisters in the morning.

Past History

She had previously admitted in the hospital with the chief complaints of rash after using Ecosprin and Sulphonamides containing drugs respectively.

She was hypertensive patient since 10years and using clonazepam 1mg every day night.

Personal History

The patient is an uneducated women, non-smoker, non-alcoholic, with history of allergic or hypersensitivity reactions (suspected HLA-B^{*}) and no surgical history. She claimed to have a drug reaction in the past and she is not completely aware of it being an illiterate.

History

She is married, and has no family history of any disease or drug interactions.

PRESENT REPORT

The patient has complained of rashes after 2 days therapy of medications given by the physician for the chief complaints of neurological pain and insomnia. The physician suspected that the causative drug is carbamazepine. Based on the suspicion of the physician, the Carbamazepine was withdrawn and the patient was kept under observance. It was found that after withdrawal of the Carbamazepine, the symptoms of ADR are gradually decreasing. Finally, Carbamazepine was withdrawn and in order to control the rashes Levocetirizine 5 mg was prescribed.

REACTION

Tab.Tegretol (**Carbamazepine**) is the suspected drug. STEVENS-JOHNSON SYNDROME is occurrence of

the rashes and skin blisters over the body.^[10,7,5,12] In this case rashes are seen especially at face and neck regions. STEVENS-JOHNSON SYNDROME occurs rarely as an adverse drug reaction to a medicine which is characterised by rashes, skin blisters.^[10] The exact mechanism by which the Carbamazepine causes the STEVENS-JOHNSON SYNDROME is unknown but may be due to hypersensitivity condition of the patient towards the Anticonvulsant drug(Carbamazepine). By using naranjo probability scale it was asessed that the patient was suffering from STEVENS JONHSON SYNDROME with the severity of moderate level 4b (ADR is the reason for admission).



DISCUSSION

In case of Trigeminal neuralgia patients, the major aim of the therapy is symptomatic relief i.e., to reduce pain that is caused due to contact between a healthy artery or vein and the trigeminal nerve at the base of the brain. For this purpose Anticonvulsants are used as first line drugs.^[2] The major side effect of Anticonvulsants is rashes due to hypersensitivity of the patient condition. In order to treat, Levocetirizine and Paracetamol are commonly used in this treatment.^[11] Here, in this case Levocetirizine 5 mg was used to reduce allergic reaction, Paracetamol 650 mg was used to reduce inflammation, eye drops Lacrigel was used as the rash and skin blisters are more on the face region she was having slight irritation to the eyes, Linezolid is used as she is having heavy skin blisters around neck region it may prevent from supra-infection and Pantoprazole is used as proton pump inhibitor respectively. It was confirmed to be STEVENS-JOHNSON SYNDROME ADR caused by using Carbamazepine as the patient reports the gradual decrease of the symptoms of ADR when the carbamazepine is withdrawn. Carbamazepine is an Anti-convulsive drug, here it is used to treat pain caused by Trigeminal neuralgia.

Considering the ADR's seen in the patient to be harmful, if left untreated it may cause severe effect, so carbamazepine was withdrawn and also the carbamazepine was replaced with Baclofen 25 mg which is a muscle relaxant. The reason for replacing the carbamazepine with Baclofen was to provide better therapy.

OUTCOME AND FOLLOW UP

After the withdrawal of Carbamazepine the patient reported the decreased symptoms of ADR. The discharge medication of the patient contains following medication: Tab 1-AL (Levocetirizine) 5 mg, Lioresal (Baclofen) 25 mg. The patient condition was absolutely normal and there were no other complaints. The patient has been educated regarding the ADR's and the follow up was done through phone call.



CONCLUSION

ADR's are a major cause of morbidity, hospital admission and even in sometimes death of the patient. Hence, it is very essential to recognize the ADRs and to establish a causal and healthy relationship between the medication and the adverse event. Though the ADR caused in this case is moderate, if left untreated may become lethal. So, it is the duty of the clinical pharmacist and physician to make the patient conscious regarding the possible ADR's of the prescribed medication.

In order to prevent ADR's we recommend

1. Surveillance, monitoring and education of patients are important in preventing adverse drug reactions.
2. ADR's should be recorded in file and communicated to patients.
3. When we observe any reactions due to administration of drugs, OTC medications should not be taken without consulting doctor
4. There should be proper audit of prescriptions and notification of ADR should be made mandatory.
5. Patients should be educated on Advantages and disadvantages of self-medication.
6. The data from clinical pharmacologists, physicians or neurologists are useful for improved management which can help in faster recovery of the patient.
7. In order to prevent ADR's, ADR alert card should be provided which includes all the information regarding patient's past drug reactions (if any present).

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