ABSTRACT

Toxic epidermal necrolysis is a potentially life-threatening situation for skin that is frequently induced by drugs. The mucocutaneous reaction is characterized by bullous detachment of the epidermis and mucous membranes. Here we are reporting a case of toxic epidermal necrolysis in a 25-year-old female Epileptic patient after receiving the Carbamazepine. On the second day of the Carbamazepine patient developed facial puffiness and macula papular rash with flaccid bullae present over the face, lips, upper back which spreads gradually all over the body. There was burning sensation, watering and pain in both eyes, mating of eye lashes also present. She is diagnosed as toxic epidermal necrolysis. The Clinical impression was TEN induced by Carbamazepine. She was treated with injection Dexamethasone, Pheniramine, topical antibiotics and corticosteroids. The outcomes of the treatment includes withdrawal of inducing agent and early diagnosis and treatment is needed.

KEYWORDS: Toxic epidermal necrolysis, Carbamazepine, flaccid bullae, macula papular rash.

INTRODUCTION

Toxic epidermal necrolysis (TEN), also known as Lyell’s syndrome, is a widespread life-threatening mucocutaneous disease where there is extensive detachment of the skin and mucous membrane characterized by full thickness necrosis of the epidermis. Patients initially develop pain, tenderness or a burning sensation in the skin associated with fever and malaise, which generally begin abruptly. Over the next 1 to 3 days, ill-defined erythematous macules
or a diffuse erythema develops over the trunk and extremities.[1] As the disease progresses, sheets of full-thickness epidermis detach, revealing dark red, moist dermis. TEN involves more than 30% of epidermal detachment. Between 10%-29% epidermal detachment is diagnosed as TEN overlap. Anti epileptic drugs having the adverse effects of serious cutaneous, hematological and hepatic events. The toxic epidermal necrolysis (TEN) are rare but severe cutaneous adverse reactions are caused by the medications. They carry a high mortality and morbidity rate, early diagnosis and rapid treatment may improve the prognosis. In the United States, the annually frequency of TEN is reported to be 0.22-1.23 cases per 100,000 population. World wide population the average annual incidence of Toxic epidermal necrolysis is 0.4-1.3 cases per million population.[2] In 1992 year the cumulative incidence of Toxic epidermal necrolysis cases in Germany was 1.9 cases per million population in the population female-to-male ratio is 1.5:1. It is occurs in all age groups between 46-63 years of aged patients.[3] Carbamazepine causes the toxic epidermal necrolysis in a frequency of 14 per 1,00,000 users.

CASE REPORT

A 25-year-old female patient presented with a rapidly progressive maculopapular rash with flaccid bullae present over face, lips, neck and all over the body, fever. Patient was a known Epileptic patient with Psychiatric disorder was under the treatment of T. Trihexyphenidyl 2mg BD, T. Sodium valproate 500mg BD(1/2-0-1/2) since 6 months, along with them recently added T. Carbamazepine500mg(1/2-0-1/2). On the 2nd day of Carbamazepine, patient developed facial puffiness and red papules over the face and lips which spreads gradually all over the body. It was associated with fever and oral lesions. Patient consulted local Physician and prescribed some medications but not get relief with that medications. Later patient developed fluid filled lesions all over the body, face, lips and back. She had no personal or family history of skin diseases.[5] Physical examination showed hypotension (systolic blood pressure 90mmHg). Patient was febrile. Clinical examination of the skin revealed a generalized macula popular rash with flaccid bullae present on face, lips and upper back and all over the body. The Nikolsky sign was positive. The erythematous rash was covering almost all over the body with epidermal detachment[4] of 70% body surface area. There was burning sensation, pain in both eyes, watering present and mating of lashes present. Her total white blood cell count was 10,800/cumm(raised). No atypical lymphocytosis or eosinophilia was noted. Platelet count was normal. Haemoglobin was low (10gm/dl). Liver function tests showed elevated direct bilirubin 0.4mg/dl(0-0.3mg/dl) and
decreased globulin levels 1.2gm/dl(1.8-3.6gm/dl). The clinical impression was TEN induced by carbamazepine. Carbamazepine was stopped immediately. She was treated with high dose intravenous dexamethasone and pheniramine. Fever was treated with T.Paracetamol. Lesions were treated with topical glucocorticoids and antibiotic preparations like(Ointment Framycetin, Clotrimazole mouth paint, Triamcinolone oral paste) calamine lotion. Eyes and lips were covered with saline soaked sterile pads. Patient was also treated with cefixime1giv. Supportive treatment given includes T.Paracetamol for fever and pain management, intravenous fluids. Patient was continued with Sodium valproate for seizures on fourth day of admission.

DISCUSSION

Our patient presented with generalized maculopapular rash with flaccid bullae over face, lips and all over the body after initiating the therapy with carbamazepine. Clinical findings
were consistent with the diagnosis of TEN. Several case reports have shown that carbamazepine is one of the culprits in inducing TEN. Incubation period for development of TEN after initiating carbamazepine was less than 3 weeks, which is in conformity with earlier reports. Specific epidemiological studies have not been published on the incidence of TEN in developing countries like India. She was treated with intravenous fluids, corticosteroids, antihistaminics. Fever was treated with T.Paracetamol. Lesions were treated with topical glucocorticoid and antibiotic preparations (Ointment Framycetin, Clotrimazole mouth paint, Triamcinolone oral paste) calamine lotion. Eyes and lips were covered with saline soaked sterile pads. Patient was also treated with cefixime.1g.iv. Patient was continued with Sodium valproate for seizures on fourth day of admission.

Cytotoxic lymphocyte-mediated immune reaction (CTL) aimed at the destruction of the keratinocyte expressing foreign antigens as primary causes for development of TEN. Tumor necrosis factor-a (TNF-a) and interleukin-6 (IL-6) have also been involved in the pathogenesis of TEN as increased amount of these cytokines are found in the blister fluids in TEN patients. These inflammatory cytokines may play their damaging roles by recruiting the cytotoxic T cells to the epidermis. A strong association has been reported between leucocyte antigen (HLA)-B*1502 and carbamazepine-induced SJS in the patients. European studies suggested that HLA-B*1502 is not a universal marker but is ethnicity specific for Asians. Biopsy of the specimen shows necrosis of basal layer cells without massive inflammatory infiltration of the dermis; in specimens with mature lesions it is possible to observe necrosis of keratinocytes involving all the epidermis at the level of the basal membrane. Better prognosis of the patient treated with systemic steroids and appropriate topical care of the epithelial eroded areas.

CONCLUSION
We conclude that Toxic epidermal necrolysis is associated with patient is consuming NSAIDS, anti epileptic drugs. Patients with TEN have a significantly higher chance of survival with early recognition and treatment is needed. withdrawal of the inducing drug. Admiting the patient in a critical care center we can hope better prognosis. Approaching corticosteroids therapy and antibiotic therapy and management of nutritional therapy is required for the minimizing the severity of reactions.
REFERENCES


