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A Retrospective Review of Cases of SJS and TEN in a Tertiary Care Hospital, Bangalore.

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Background

Stevens-Johnson syndrome (SJS) and Toxic epidermal necrolysis (TEN) are rare bullous dermatologic reactions accounting for 0.05 to 2 persons per 1 million population per year. Medicinal agents are an important cause of SJS and TEN. The medical and economic impact of these reactions is therefore greater than might be expected on the basis of incidence. Therefore, we conducted a retrospective review of cases of SJS and TEN from the year 2001 to 2006 as referred by the Department of Dermatology, Victoria Hospital, Bangalore, to quantify the association of specific medicines with the same. Data were collected from the database of the department which was prepared by our faculty using the case sheets and by talking to the patients/relatives as and when cases were reported. A total of 53 cases of SJS and TEN were identified out of which 28(53%) cases were reported to have SJS and 25(47%) cases were TEN. It was found that 35(66%) were male and 18(34%) were female. Out of 53 cases 33(62%) were adults and 8(15%) were geriatric. Antibiotics were the main medicines that caused SJS followed by anticonvulsants and in case of TEN, anticonvulsants were the main agents. Out of 28 SJS cases, 17(61%) cases led to hospitalization and among 25 TEN cases, 5(20%) cases led to hospitalization. One TEN case resulted in the death of the patient, accounting for (4%) of the total number of TEN reactions. Thus, it can be concluded that ADR monitoring program helps in detecting the ADRs like SJS, TEN and many others which can help physicians in correct medical decision making and also can prove in promoting better patient care.

Key Words: *Stevens Johnson Syndrome SJS, Toxic Epidermal Necrolysis TEN*

INTRODUCTION

An ADR has been defined by the World Health Organization as "a response to a drug which is noxious and unintended, and which occurs at the doses normally used in man for prophylaxis, diagnosis or therapy of disease or for the modification of physiological function"[1]. Among all the ADRs induced by the medication, reactions like Stevens Johnson Syndrome (SJS) and Toxic Epidermal Necrolysis (TEN) are more serious and life threatening. The incidence of toxic epidermal necrolysis is estimated at 0.4 to 1.2 cases per million person-years [2,3,4,5] and of Stevens-Johnson syndrome at 1 to 6 cases per million person-years.[2,3] Although infrequent, these conditions may kill or severely disable previously healthy people. A few cases have prompted the withdrawal of newly released medicines. Stevens-Johnson syndrome (SJS) may also present as a dermatologic emergency characterized by purpuric macules and targetoid lesions; full-thickness epidermal necrosis, although with lesser detachment of the cutaneous surface and mucous membrane involvement and severe constitutional symptoms.[6] Medicines are an important cause of Stevens-Johnson syndrome, but infections or a combination of infections and medicines has also been implicated.[7] TEN is an acute dermatologic disease the presentation of which may constitute a true emergency. The disorder is characterized by widespread erythematous macules and targetoid lesions; full-thickness epidermal necrosis, at least focally; and involvement of more than 30% of the cutaneous surface. Commonly, the mucous membranes are also involved. Nearly all cases of TEN are induced by medications, and the mortality rate can approach 40%. The medical and economic impact of these disorders is therefore greater than might be expected on the basis of

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incidence. Better information on these reactions should help in better medical decision making.[6] Therefore, we conducted a retrospective review of cases admitted to Victoria Hospital, Bangalore with SJS and TEN from 2001 December to quantify the association of specific medicines with the same.

METHODOLOGY

The data of both in-patients and out-patients as referred to the Department of Pharmacy Practice by the Department of Dermatology, Victoria Hospital, Bangalore, during 2001 to 2006 were included in the study. The retrospective data were collected from the database of the department which was prepared by the department faculty using the case sheets and by talking to the patients/relatives as and when cases were reported. Demographic details, causative medicines implicated and the management out-come were noted from the database.

RESULTS AND DISCUSSION

A total of 53 cases of SJS and TEN were identified from the database. From the demographic details of the patients, it was found that 28(53%) cases were reported to have SJS and 25(47%) cases had TEN (Figure 1). Among 53 cases, 35 (66%) were male and 18(34%) were female (Figure 2). It was seen that 33(62%) were adults and 8(15%) were geriatrics (Figure 3). Skin was the main part affected 49(92%) in majority of the cases. The therapeutic class of the medicines that caused the reactions were analyzed and found that highest incidence of reactions was noted with antibiotics 19(36%) in case of SJS. Antibiotics were implicated in 4(1%) cases of TEN. Anticonvulsants were the causative drugs in 6(1%) cases of SJS and 7(1%) cases of TEN. Ciprofloxacin was the most common antibiotic which caused SJS (5 cases , 26%) and Ofloxacin (3 cases, 14%) attributed to maximum cases of TEN followed by Anticonvulsant-Phenytoin caused 5(83%) of SJS and 5(71%) of TEN (Figure 4, Figure 5). In many cases it was not possible to identify the exact cause for the reaction which was due to either lack of knowledge in patients or patient could not remember which medicine he/she consumed. Out of 28 SJS cases, it was found that 17(61%) cases led to hospitalization and 5(18%) cases led to prolonged hospitalization. Among 25 TEN cases, 5(20%) cases led to hospitalization and 10(40%) cases led to prolonged hospitalization. One TEN case resulted in the death of the patient accounting for (4%) of the total number of TEN reactions.

CONCLUSION

From our study we found that the use of antibiotics and anticonvulsants is associated with the risk of SJS or TEN. Hence, a registry for these medicines is required which

Figure 1: Total number of SJS and TEN

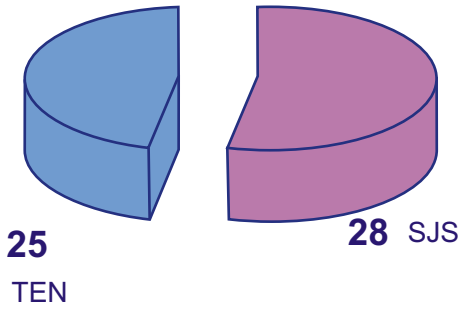

Figure 2: Demographic details of patients experiencing SJS and TEN

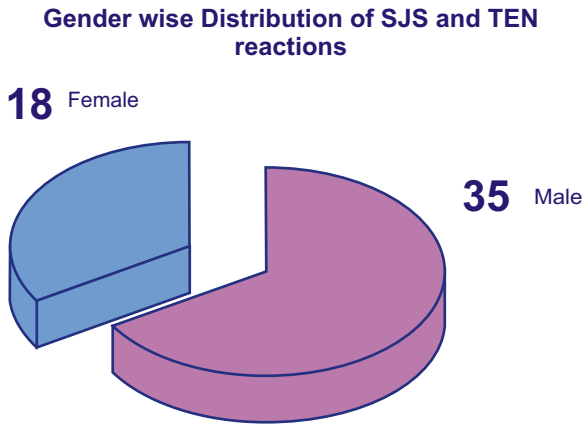

Figure 3: Depicts SJS and TEN categorized based on age of the patients

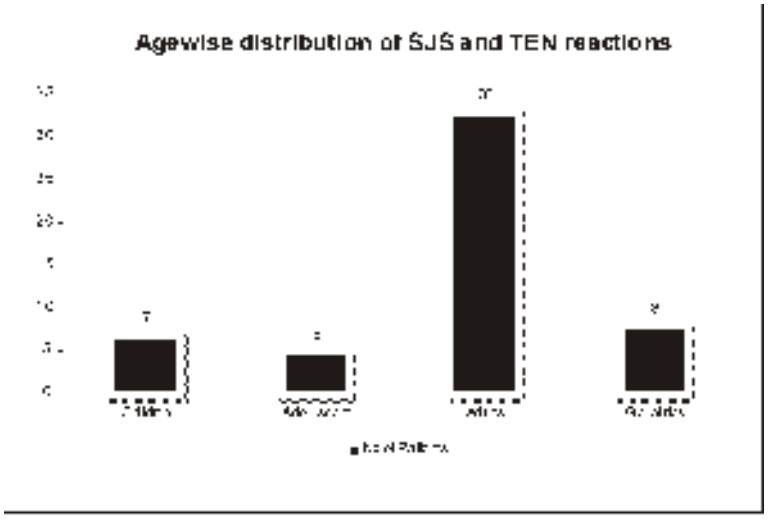

Figure 4: Shows the medicines that cause SJS AND TEN

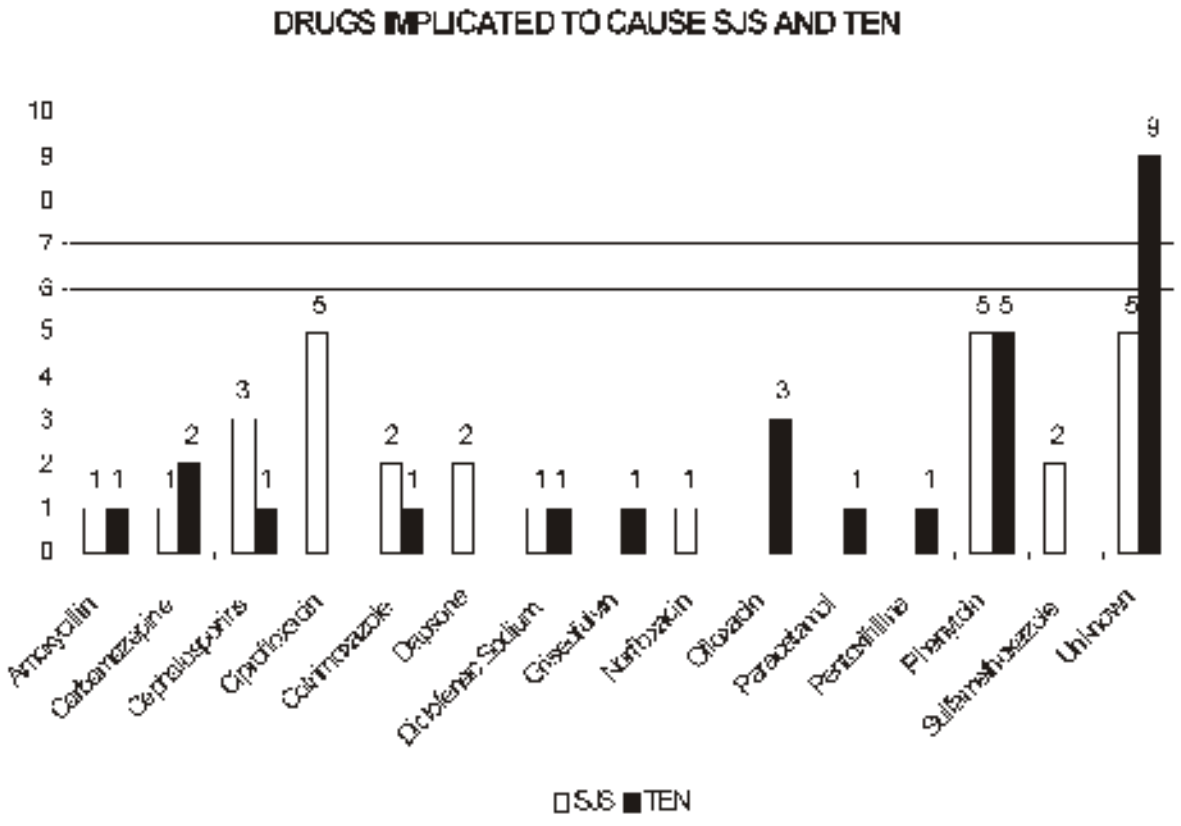

Figure 5: shows the Therapeutic Class of medicines that cause SJS AND TEN

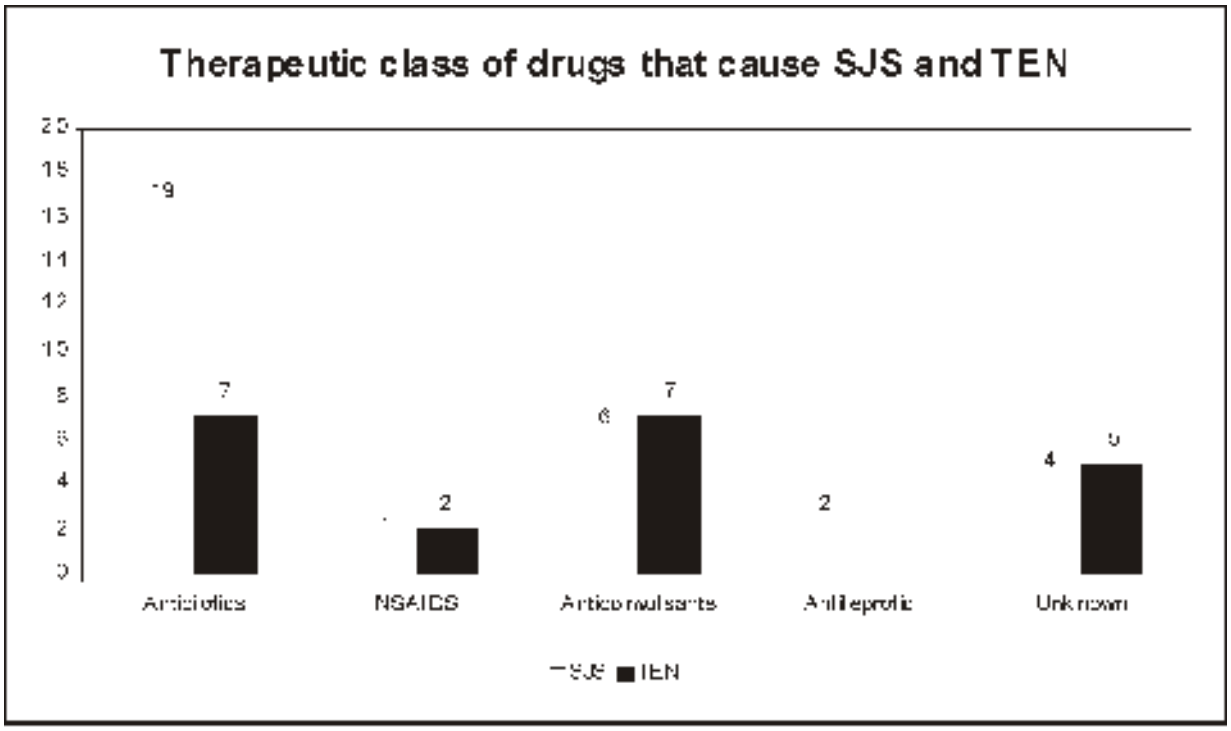

Figure 6: Representative picture of SJS.

Figure 7: Representative picture of TEN.

Will help in determining the national incidence of SJS and TEN. This will further enhance our knowledge of these reactions. Thus, it can be concluded that ADR monitoring program helps in detecting the ADRs like SJS, TEN and many others which can help physicians in correct medical decision making and can help in promoting better patient care.

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