A rare case report of Risperidone Induced Steven Johnson syndrome

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Abstract

Stevens-Johnson syndrome (SJS) is the most severe cutaneous adverse reactions to medications. It is characterized by the detachment of dead epidermis and the erosions of mucous membranes. Either drugs or infectious agents may cause SJS. But risperidone induced SJS is not so for reported and first time we are reporting this case. The woman developed SJS when she was started on risperidone for her HIV induced psychosis. Her appearance and recovery of SJS symptoms were rapid and there was apparent correlation between initiation and recovery of symptoms with risperidone.

Key-words: Risperidone, Steven Johnson syndrome, Drug reaction

1. Introduction

Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) are the most severe cutaneous adverse reactions to medications (Becker, 1998). In SJS the epidermal detachment less than 10% of the body surface area, in the form association with widespread erythematous or purpuric macules or flat atypical targets, plus two mucosal sites involvement (Prendiville, 2002). SJS is characterized by the detachment of dead epidermis and the erosions of mucous membranes. The mechanisms associated with a panel of high-risk medications, varying in extent of skin involvement and outcome of the drug reaction. Accumulated clinical and experimental data suggest that the mechanisms of SJS and TEN depend on a medication-specific immune response. SJS may be caused by either drugs or infectious agents. Mortality rates is approximately 5%. More than 220 medications have been implicated, but the major offenders are sulphonamide, anticonvulsants, beta-lactam antibiotics; lamotrigine; tetracyclines; and quinolones (Pereira *et al.,* 2007).But risperidone induced SJS is not so for reported and first time we are reporting this case report.

2. Primary treatment

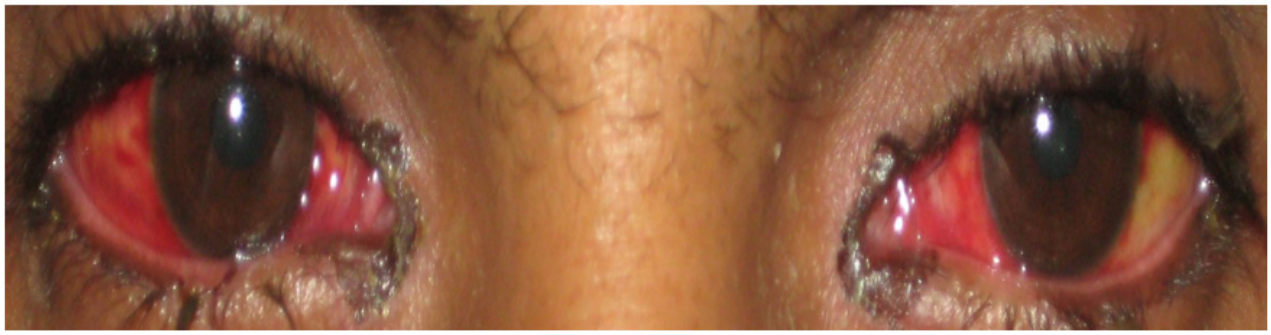
First important element of treatment consists of discontinuation of the offending drug. The faster the causative drug is eliminated, the better the prognosis. Second, the patient should be admitted to a burn unit where intensive supportive care and specialized treatment can be given by personnel experienced in handling extensive cutaneous injuries. Scrupulous attention must be paid to the eyes, respiratory tract, fluid and electrolyte balance, nutrition, infection, and pain relief. Administration of steroids if life threatening (Pereira *et al.,* 2007).

3. Case History

Thirty year old female, educated up to high school, belongs to lower socio-economic status, from Hindu joint family presented to us with complaints of smiling and laughing to self, hearing of voices of two or more person in the absence of any external stimuli, irritability, ↓ need for sleep, mood lability, picking the things from road and putting them into mouth, occasional big talk, abusive and aggressive behavior, impaired person hygiene and ↓ oral intake for three week duration. Before she visited us she was taking risperidone 4 gm, Trihexyphenidyl [THP] 2mg, and carbamazepine [CBZ] 600mg. After initial assessment she was admitted with diagnosis of acute transient psychotic disorder (ATPD) into psychiatry ward for further evaluation and treatment. Initial investigation showed low TLC count (2300), low Hb, and low platelet count suggestive of pancytopenia. Due to this CBZ was stopped and she was continued on risperidone 4mg and THP 2mg. On further evaluation she was having fever on and off, diarrhea 5-6 episode/ day, loss of weight > 10% of original body weight. She was malnourished, poorly kempt and poor personal hygiene. With the consent screening for HIV was sent and it came to be positive. Mean time we increased the risperidone dose. After 5th day of admission she developed skin lesions purpuric macules on the chest and over the upper back and atypical targetoid lesions mainly on extremities along with fever. On 6th day lesion over the chest and back progressed rapidly, on the face purpuic macules and erosions appeared and involved two mucosal sites (eye and oral mucosa). Thus diagnosis of SJS was made. We thought causative factor could be either risperidone or

CBZ. We stopped all the medication and she was put on injectable steroids. Mean time her psychotic and other psychiatric symptoms decreased in severity. After two days initiation of steroids her she started showing improvement in lesion and fresh lesion stopped appearing. She was referred to district antiretroviral therapy centre once the lesion came down.

Fig.1. *Eyes showing mucosal lesion*



4. Discussion

Our case is unique case where the patient with HIV positive status has developed the *Steven Johnson syndrome* caused by risperidone. So for only one case has been reported where patient developed *erythema multiforme minor* while taking the CBZ and risperidone (Desarkar & Nizamie, 2006). This is first case where risperidone has induced SJS. In our case, though she had received the CBZ before visiting to us with pancytopenia either induced by CBZ or by HIV status. But symptoms of SJS have developed when she was receiving risperidone and it was precipitated when the dose of risperidone was escalated. When this syndrome appeared she was exclusively on above medication and there was no other possibility. Though we can think of CBZ is the causative but this is unlikely because elimination half-life after a single dose of CBZ is 37.7±5.7hr and it decreased during chronic treatment to a 21 hrs. Sixty three hrs will be elimination half life with two standard deviation and lesion appeared after 5th day of stopping of this medicine makes it the lesion are due to Risperidone. [5] Second point about this case is rapid onset of symptoms and also rapid recovery of lesion. This can be explained by HIV positive status. It is well known entity that their immune- compromised status will not allow the lesion to present for prolonged time. Third point about this case is HIV positive status patients are more prone develop drug reaction of any kind and this is one among them. Patient with HIV status can develop different type lesions, as our case initially developed *erythema multiforme* lesions and later SJS lesions. Hence the severity varies and any drug can cause severe adverse drug reaction HIV positive status and here is Risperidone is responsible for that was reported by Temesgen and Beri (2004).

5. References

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