



Dexamethasone Induced Psychosis: An Archetype of Prescription Cascade

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Received: 10-02-2017; Revised: 06-03-2017; Accepted: 12-04-2017.

ABSTRACT

Dexamethasone belongs to the long acting corticosteroid commonly used in treating a variety of diseases including inflammatory, neoplastic, rheumatologic, allergic diseases. Chronic treatment with high dose of dexamethasone is reported to induce psychiatric symptoms including mania, psychosis, depression; etc. Here, we illustrate a case of a 41 year old male patient diagnosed with glioblastoma and on Inj. dexamethasone 4 mg TID for the same. He started developing psychotic symptoms after about one and a half weeks. Psychiatric consultation was taken and confirmed to be drug induced psychosis, followed by antipsychotic management for the same though tapering of the concerned drug helped, thus, culminating in a prescription cascade.

Keywords: Dexamethasone, glioblastoma, psychosis, prescription cascade.

INTRODUCTION

Dexamethasone is a long acting corticosteroid with minimal sodium-retaining potential. It is used as an anti-inflammatory or immunosuppressant agent in the treatment of a variety of diseases including inflammatory, neoplastic, rheumatologic, allergic, gastrointestinal, endocrine, nervous system, renal, respiratory disorders. Steroid treatments are usually associated with psychiatric symptoms which include mania, psychosis, depression, and delirium.^{1, 2} A meta-analysis report in a study states that severe psychotic reactions occurred in 5.7% of patients taking corticosteroids and mild-to-moderate reactions in 28% of patients.³ The exact dose of dexamethasone which can cause psychosis is not yet specified in any study conducted.⁴ A study states that the prevalence of corticosteroid-induced psychotic disorders varies around 5%.⁵ Most corticosteroid-induced symptoms start during the first few weeks after treatment initiation but their onset can also be in the first 3–4 days. Corticosteroid-induced psychosis involves a series of psychological changes that can occur at any time during treatment with symptoms of agitation, anxiety, insomnia, irritability, and restlessness, mania, depression, and psychosis.⁶

CASE REPORT

A 41 year old male patient weighing 68kg was diagnosed with glioblastoma and was on Inj. dexamethasone 4 mg TID for the same. He was continued on Levetiracetam for seizure. He started developing psychotic symptoms after about one and a half weeks. Oral dose of Dexamethasone was initiated (4mg TID). Psychiatric consultation was summoned and was confirmed to be psychosis secondary to dexamethasone treatment. He was started on Haloperidol for his psychotic symptoms. It was augmented with trifluoperazine. Trihexyphenidyl was started to prevent Extra Pyramidal Symptoms. Then,

radiotherapy consultation was sought after two weeks and thereby, adjuvant radiotherapy was started. Oral dose of dexamethasone was tapered to 4mg BD for 7days followed by 2mg BD for 7days; 1mg BD for 7days and finally 1`mg OD for 7 days. The patient took dexamethasone for a period of one month. Temozolamide was added as chemotherapeutic agent and ondansetron as anti-emetic agent. Trifluoperazine was stopped as patient was symptomatically better. The dose of haloperidol was tapered and stopped. Patient got better in the course of stay. Patient and bystanders were psych educated regarding the disorder. Patient is stable at the time of discharge.

DISCUSSION

Psychiatric symptoms usually develop three to four days following the initiation of corticosteroid therapy, although it can occur any time, including after cessation of therapy.⁽⁷⁾ These symptoms can be managed by either tapering of corticosteroid dosage up to lowest possible dose and then gradually discontinuing therapy or administration of psychiatric drugs for symptom relief.⁸ Depending upon the severity of psychosis or the underlying disease in the case presented, psychopharmacologic treatment may be necessary. Treatment should be based on the patient's underlying medical condition when selecting psychotropic drugs. Our case becomes a sheer example of a prescription cascade since a new medicine (antipsychotics) is prescribed for the treatment of an ADR (psychosis) to another drug (dexamethasone) mistaking it to be a new medical condition that requires treatment, though tapering the dose of the concerned drug helped.⁹

A study by Lewis states that 92% of 36 patients recovered by tapering of corticosteroids, neuroleptics brought recovery in 84%, and 100% of 8 patients managed by both ways recovered. Neuroleptics and tricyclic



antidepressants were the psychiatric drugs used for symptom relief.

Similar case of 20yr old female was recorded in Nigeria who was on dexamethasone (4mg daily) without prescription so as to increase her body weight. The dose was gradually increase to 4mg BD 2 months following which she started developing psychotic symptoms and insomnia. She was started on a parenteral diazepam and risperidone to which she responded favorably.¹⁰

CONCLUSION

Patients must be counseled with appropriate information regarding the side effects of dexamethasone and urged to report and consult physician/pharmacists upon persisting symptoms, if any. The episodes of psychosis and unnecessary treatment for the same amounting to prescription cascade can prolong the hospital stay¹¹ by increasing the risk of developing another ADR to the patient⁽⁹⁾ or may result in readmission⁵ and increase the total cost for the patient. Although early recognition and management with sedatives/anti-psychotic drugs (haloperidol prophylaxis) is crucial,¹¹ the importance of laboratory tests to confirm a drug induced reaction must not be underrated so as to avoid an unnecessary treatment or a prescription cascade.

Acknowledgement: First and foremost, I thank the Almighty and my parents for channeling my strength and courage so as to aspire my aims.

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Source of Support: Nil, Conflict of Interest: None.

