Journal of Cardiovascular Disease Research

ISSN: 0975-3583,0976-2833 VOL15, ISSUE 01, 2024

STEROID INDUCED PSYCHOSIS: A CASE SERIES

Dr Pooja Bhatia,[1*] Dr Nikhil Govil,[2] Dr Savita Chahal,[3] Dr Ashish Aggarwal,[4] Dr Arun Kumar Pandey[5]

Authors Affiliations-

1. Senior Resident, Department of Psychiatry, Kalpana Chawla Government Medical College, Karnal, Haryana, India
2. Associate Professor, Department of General Medicine, Kalpana Chawla Government Medical College, Karnal, Haryana, India
3. Associate Professor, Department of Psychiatry, Kalpana Chawla Government Medical College, Karnal, Haryana, India
4. Assistant Professor, Department of Psychiatry, Kalpana Chawla Government Medical College, Karnal, Haryana, India
5. Professor, Department of Psychiatry, Kalpana Chawla Government Medical College, Karnal, Haryana, India

***Corresponding Author**- Dr Pooja Bhatia

E-mail: pooja7bhatia@gmail.com

Mobile no: 08221874646

Funding: The authors received no financial support for the research, authorship, and/or publication of this article.

Conflicts of interest: The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

ABSTRACT

Steroids are widely used in modern medicine to address various health conditions. Instances have been documented where the usage of steroid led to various psychiatric symptoms. We report four cases with no previous history of psychosis who experienced brief psychotic episode following steroid treatment.

INTRODUCTION

For many years, steroids have been used successfully to treat a wide range of acute and chronic medical illnesses, including autoimmune diseases, system disorders, severe allergic reactions, and palliative care[1,2]. Prescribed steroids are reported to cause psychiatric symptoms including psychosis, often within weeks of treatment[3,4].

ISSN: 0975-3583,0976-2833 VOL15, ISSUE 01, 2024

Steroid induced psychosis is a recognized but uncommon side effect of steroid treatment, primarily associated with oral systemic steroid administration. Its likelihood increases with higher doses[5]. However, there have been isolated case reports of it occurring with local steroid injections.In this report, we describe four cases of psychosis occurring as a consequence of steroid use in patients with no prior history of psychotic symptoms.

CASE 1

A 30-year-old female was referred from the Department of Dermatology with complaints of abnormal behavior, suspiciousness, sleep disturbance, and aggression for 5 days. A thorough history revealed that the patient had self-medicated with over-the-counter medications of unknown nature to treat her fever that occurred 3 months back. After this, she developed a drug reaction in the form of generalized rashes all over her body. She consulted a dermatologist after around a month and was prescribed Tablet Prednisolone 40 mg. She took the medications for around 20 days before presenting to the Department of Psychiatry. She had no prior or family history of any psychiatric illness. Her family members mentioned that while at home she would remain suspicious of them saying that they wanted to harm her. On presentation, she was fearful, continuously crying and trying to hit the doctor while accusing that the doctor had hidden a nail in her teeth to harm her. She was admitted to the Department of Psychiatry and was investigated to look for any organic cause of the symptoms. All biochemical, metabolic, and radiological investigations that included MRI brains were inconclusive. On mental status examination, she was fearful and repeatedly stated that "the doctor had replaced herself with someone else so that she could harm me." She had good eye contact and her speech was spontaneous, and coherent with normal rate and volume. Her thoughts were delusional with paranoid content, however, she denied any auditory or visual hallucinations. Her judgment was poor and insight was absent. She was started on Tablet Risperidone 2mg which was further increased to 4mg in divided doses and Tablet Clonazepam 0.5 mg once at night. Dermatology opinion was sought given tapering of Tablet Prednisolone. Tablet Prednisolone was gradually tapered and was stopped in around 15 days. The patient was discharged from the ward after 5 days at the attendant's request. On her follow-up visit 10 days later, her symptoms were significantly relieved on Tablet Risperidone 4 mg.

CASE 2

A 48-year-old female with no past or family history of psychiatric illness was brought to the psychiatry OPD by her husband with complaints of bizarre and aggressive behavior, muttering to self, suspiciousness, and sleep disturbance. Ten days before this presentation, she had been brought to the department of dermatology for complaints of allergic eruptions over her body for the last 2 years for which she was prescribed tablet prednisolone 40mg and tablet hydroxychloroquine 200mg twice a day. On initial presentation to the psychiatric OPD, she was irritable, verbally abusive, poorly kempt, and had paranoid delusions and auditory hallucinations. She was started on Tablet risperidone 2mg and tablet clonazepam 0.5 mg and steroids were

ISSN: 0975-3583,0976-2833 VOL15, ISSUE 01, 2024

tapered off over 15 days. She reported a significant improvement in her symptoms after around one week.

CASE 3

Psychiatry consultation was sought for a 15-year-old boy referred from the Department of General Medicine where he had been admitted for the complaint of fever and severe headache. He was presumptively diagnosed with meningoencephalitis and put on injectable dexamethasone 24 mg intravenous in divided doses along with antiviral therapy. The patient became afebrile on day 2 of admission however developed insomnia, fearfulness, seeing images and shadows, and bizarre hallucinatory experiences on the third day. He would repeatedly say that his mind had been hijacked. Psychiatric examination revealed that he had delusions and hallucinations, however, no disturbance of consciousness or orientation was found. All his biochemical, metabolic, and radiological investigations including MRI brain ruled out the possibility of any organic basis of symptoms. There was no apparent stressor significant enough to cause such psychiatric symptoms. He was started on Tablet Olanzapine 2.5mg and tablet clonazepam 0.5 mg and injectable steroids were stopped. The patient showed improvement in his psychotic symptoms 5 days after cessation of steroids along with the introduction of low-dose oral antipsychotics

CASE4

A 25-year-old male presented in emergency with a history of trauma right eye and was diagnosed with a subtle Relative Afferent Pupillary Defect was started with on injection of Methylprednisolone 1 gm daily. On day 3 of his therapy he showed the symptoms of sleep disturbance and suspiciousness. On examination, he showed irritability and abusive behavior. He even slapped a friend on the pretext that he was talking about him to other batchmates. He also complained about the same to the consultant. On mental status examination, he was found to have delusion of reference. His investigations came out to be within normal limits. He had no previous or family history of any psychiatric illness. On day 4 of his admission, injection methylprednisolone was withheld considering it to be the cause of psychiatric symptoms. Oral benzodiazepine was given for sleep disturbance however no antipsychotic was introduced. His suspiciousness and sleep disturbance showed significant improvement after 3 days. He was then started on oral prednisolone 50mg/day in tapering doses.

DISCUSSION

Steroid-induced psychosis is an infrequently occurring disorder, which is extensively documented in literature. It falls within the section of substance or medication-induced psychosis, as defined in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders[6]. In order to diagnose steroid-induced psychosis, specific conditions need to be met. Firstly, the patient must experience at least delusions or hallucinations following exposure to a medication capable of causing such symptoms. The disturbance should not be attributable to a non-medication-induced psychotic disorder, and it should not exclusively coincide with a period of delirium. Lastly, it should lead to clinically significant distress or impaired functioning.

ISSN: 0975-3583,0976-2833 VOL15, ISSUE 01, 2024

In the context of research publications, the underreporting of this condition in the general population is a potential issue. This is because not all the instances of psychosis associated with steroid are severe or follow long duration. Many cases resolve on its own without any intervention. While extensive research and comprehensive documentation exist regarding the physical side effects of steroid therapy, the neuropsychiatric adverse effects have been relatively underexplored in literature[7].

This case series further supports the growing evidence indicating the existence of steroid-induced psychotic symptoms, spanning a spectrum from anxiety and insomnia to severe mood disorders and psychosis[8,9].

Since this reaction is likely iatrogenic and can often be prevented with careful steroid usage, incorporating awareness of these adverse effects, identifying risk factors, and considering treatment options could enhance clinical practice. Physicians should prioritize educating patients and their families about the potential psychiatric side effects associated with steroid treatment before initiating therapy.

Various treatment approaches are available for steroid induced psychosis. The most widely used and effective treatment strategy is to taper and discontinue steroids where possible. Insome cases this has proven sufficient in reversal of symptoms. Another option is to treat the patient with antipsychotic medications[10].

REFERENCES

1. French J, Khan A, White H. Steroid induced psychosis in an asthmatic child: case report and 10-year literature review. Can Child Adolesc Psychiatr Rev. 2003;12(4):117-8.
2. Airagnes G, Rouge-Maillart C, Garre JB, Gohier B. Homicide and associated steroid acute psychosis: a case report. Case Reports in Medicine. 2011.
3. Janes M, Kuster S, Goldson TM, Forjuoh SN. Steroid-induced psychosis. Proc (Bayl Univ Med Cent). 2019;32(4):614–5.
4. Lesko A, Kalafat N, Afreen M. Four Case Reports of Acute Psychosis Secondary to Low Doses of Prednisone/Prednisolone. Cureus. 2021 Dec 31;13(12):e20853.
5. Bachu A K, Davis V, Abdulrahim M, et al. Corticosteroid-Induced Psychosis: A Report of Three Cases. Cureus2023; 15(5): e39221.
6. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington, DC: American Psychiatric Publishing; 2013.
7. Warrington TP, Bostwick JM. Psychiatric adverse effects of corticosteroids. Mayo Clin Proc. 2006;81(10):1361-7.
8. Cerullo MA: Corticosteroid-induced mania: prepare for the unpredictable. Curr Psychiatr.2006; 5:43-50
9. Jasani R, Deacon JW, Sertich A. Corticosteroid-Induced Mania After Previous Tolerance of Higher Doses. Cureus. 2021;13(9):e17719.
10. Huynh G, Reinert JP. Pharmacological Management of Steroid-Induced Psychosis: A Review of Patient Cases. J Pharm Technol. 2021;37(2):120-6.

ISSN: 0975-3583,0976-2833 VOL15, ISSUE 01, 2024

Informed Consent: Voluntary approval were obtained from all the four patients and the case series was prepared in accordance with the Declaration of Helsinki.