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Case Report

Ignored Complication of Steroids in an Ankylosing Spondylitis Case: Psychotic Depression

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Abstract

The use of steroids is widespread, and they are prescribed for different types of systemic diseases. Steroids provide fast and effective pain control in rheumatic diseases. Some systemic side effects of steroids are commonly seen and well known to clinicians. Psychological side effects are not rare during systemic steroid applications. Nevertheless, the diagnosis rate is quite low. We present an attenuated mentally retarded patient with ankylosing spondylitis on steroid treatment who had psychotic symptoms. We aimed to show steroid-induced psychotic complications.

Keywords: Ankylosing spondylitis, corticosteroids, psychosis

Introduction

Steroids provide rapid and effective pain control for the joint involvement of rheumatic diseases. They can be used in the form of systemic injections or local injections into joints. The long-term use of oral steroids is avoided when treating joint symptoms of rheumatic diseases. During steroid use, in addition to patient follow-up for systemic complications such as susceptibility to infections, peptic ulcer, "Cushingoid" appearance, osteoporosis, hypertension, and diabetes, patients should be followed up closely for psychiatric side effects such as depression and psychosis (1). The relationship between mental disorders and steroid use has not been sufficiently documented. Although the incidence of diagnosed psychiatric disorders associated with steroid treatment has been reported as 3%–6%, it is believed that a greater number of patients with moderate symptoms do not comply with any diagnosis (2).

Psychiatric disorders generally associated with steroids are mania, depression, psychosis or mixed mood disorders, cognitive impairment, and mild psychiatric disorders (irritability, insomnia, anxiety, and labile mood). While euphoria and hypomania are frequently observed in short-term steroid use, depressive symptoms are more common in long-term treatment (3). In this study, we aimed to present the emergence of depression with psychosis characteristics in a borderline intelligence case that we encountered during medical board assessment; the patient had received 10–15 mg/day of prednisolone for five years to treat ankylosing spondylitis (AS) with peripheral and axial involvement.

Case Report

The 38-year-old male patient, who had been diagnosed with AS approximately 12 years previously, had been receiving indomethacin and sulphasalazine since the onset of the disease. Due to an increase in his complaints, he underwent 12 sessions of infliximab treatment 3 years before. As the clinical symptoms subsided, infliximab treatment was stopped; however, due to the patient's peripheral joint complaints, prednisolone tablets had been added to his treatment for the last five years. Forty mg of methylprednisolone had been administered into the patient's knee joints several times over 5 years; follow-up procedure by a psychiatric hospital due to psychiatric complaints had been required for the last 2 years. According to the follow-up reports provided by that psychiatric hospital, the patient, who was of borderline intelligence (IQ:76), experienced occasional auditory hallucinations and paranoid delusions; the patient attempted suicide several times. The patient was diagnosed with non-organic psychotic disorder and psychotic depression and was monitored with risperidone and olanzapine treatment. Among the documents presented by the patient, a report from another medical board assessment three years before, stating that psychiatric examination of the patient was normal, caught our attention. At this stage, because the patient was followed up with 10–15 mg/day prednisolone treatment, and when the emergence of psychiatric symptoms after the administration of local steroids that are known to have side effects

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due to systemic absorption was considered, it was thought that the patient might suffer from depression and psychosis emergent from and/or induced by steroid use. It was reported that the patient, who was on 15 mg/day of prednisolone, sulphasalazine, and diclofenac sodium, with risperidone and olanzapine treatment, still had joint complaints; however, there was significant improvement in terms of psychotic symptoms in his psychiatric evaluation. It was considered appropriate for the patient, who had active joint complaints, to continue AS treatment with infliximab.

Discussion

Psychiatric side effects due to steroid use are not uncommon; however, the rate of diagnosis and treatment is very low (4). In this study, we intended to draw attention to the ignored side effects of steroids by highlighting the diagnosis of psychotic depression emergent from and/or induced by steroids in a 38-year old patient of borderline intelligence who had been receiving steroid treatment due to AS.

The common psychiatric side effects of steroid therapy are agitation, anxiety, hypomania, insomnia, irritability, labile mood, and uneasiness. In addition to these, steroid use may cause a wide range of clinical manifestations that vary from unobtrusive moods to psychotic episodes that require immediate intervention. Whereas euphoria and hypomania are observed in short-term steroid use, depressive symptoms are more common in long-term steroid treatment (5). Also, in our case, a long-term history of steroid treatment was present. Our case received 10–15 mg/day of peroral and occasional intra-articular steroid therapy for a year.

In steroid-related psychotic cases, corticosteroid dose is believed to be the most important risk factor. If the daily dose of corticosteroid is below 40 mg, the risk is considered to be low; if the dose is between 40 and 80 mg, the risk is considered to be moderate; and if the dose is more than 80 mg, the risk is considered to be high (6). Regardless of the dose, the rate of psychiatric side effects for cortisol is reported to be 5.7% (7). However, neither the dose nor other distinguishing factors can determine the severity of the psychiatric disorder in advance. For these reasons, the clinical manifestation should be closely monitored; patients and their relatives should be informed of potential side effects (8).

Although the other risk factors for psychiatric disorders that are triggered by steroids are not precisely known, drugs that alter cytochrome enzyme activity, serum albumin and CSF/serum albumin ratio, hypoalbuminemia, certain diseases (rheumatic diseases, such as systemic lupus), the presence of psychiatric family history, female gender, and personality traits before disease are considered to be risk factors (9). Our case was male, with no family history of psychiatric disease. The alteration of cytochrome enzyme activity due to concurrent nonsteroidal anti-inflammatory drug (NSAID) use and steroid use is considered to be a risk factor; because our case was not administered NSAIDs, except for spondylitis attacks, this risk factor was ignored.

For many years, premorbid personality traits have been stated to be determinant factors in psychiatric reactions triggered by steroids (10). Similarly, in studies conducted on the comorbidity of mental retardation and psychosis, it was reported that psychiatric problems occur more frequently in patients with mild mental retardation than in the general population (11). Because our case also showed characteristics of borderline intelligence, we believe that monitoring the patient by psychiatric consultation before and during steroid treatment may have enabled early treatment of the patient's attacks upon family members, auditory hallucinations, paranoid delusions, and suicide attempts.

In the literature, it was reported in studies conducted on patients with mania or mixed symptoms induced by steroid use that olanzapine was effective (12). In our case, after treatment with antipsychotics such as risperidone and olanzapine, it was reported that the patient's complaints decreased significantly.

Psychotic disorders may be seen during the course of Sjogren's syndrome, systemic lupus erythematosus, and immune-mediated rheumatic diseases such as rheumatoid arthritis. However, few studies are available in the literature regarding the comorbidity of AS with psychotic diseases. Kar SK described the comorbidity of AS with bipolar disorder in a case report of a patient (13). In these patients, although decreased physical function was well defined, the effects on psychosocial health were not well considered. Recently, AS disease has been reported to have significant effects on the mood of patients. It has been reported that one-third of patients with AS show symptoms of depression, and a relationship between the disease and anxiety and depression has been detected (14).

In AS treatment, infliximab, an anti-TNF-α drug that has been used for many years, is reported to alleviate depressive symptoms in patients whose inflammatory markers are elevated. Basal TNF-α concentration was found to be much higher in patients with depression who responded to infliximab therapy than in patients who did not. Infliximab is said to be effective in the treatment of AS accompanied by depression (15). In the treatment of our case, transition to infliximab, which previously showed good response in the treatment of active joint symptoms, may also be an appropriate approach for depression.

Conclusion

We recommend that the doctors be alert, watch patients carefully for steroid psychosis and other steroid side effects before and during treatment, and perform patient follow-up with the aid of relevant branches in terms of psychiatric and cognitive side effects of drugs that are commonly used to treat rheumatic diseases. This case is presented to emphasize that psychotic disorders caused by steroids in patients with borderline intelligence may form a basis for psychotic disease, and because chronic psychotic complications of steroid use in rheumatic diseases have rarely been reported in the literature.

Informed Consent: Written informed consent has received from patients.

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