DOI: 10.5455/bcp.20120419121147

Metoclopramide Induced Akathisia: A Case Report

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ÖZET:

Metoklopramidin indüklediği akatizi: Bir olgu sunumu

Akatizi, nesnel olarak oturamama ya da hareketsiz kalamama ve öznel bir iç huzursuzluk hissi ile karakterize ekstrapiramidal hareket bozukluğudur. Metoklopramid (Mp), acil servislere bulantı ve kusma şikayetleri ile başvuran hastaların tedavisinde yaygın olarak kullanılan, bir dopamin (D2) reseptör blokeridir. Metoklopramid, diğer dopamin reseptör blokeri ilaçlar gibi, ekstrapiramidal sistem belirtileri (EPS) ile ilişkilidir. Yazar, kısa süreli reflü tedavisi için, uygun doz aralığında metoklopramid tedavisi almaktayken akatizi gelişen 56 yaşındaki bir erkek olgudan bahsetmektedir. Hasta kliniğimize başvurduğunda, huzursuzluk ve ruhsal sıkıntıdan şikâyetçi idi. İlk olarak, metoklopramid tedavisi kesildi ve ardından 5 mg/gün diazepam tedavisi başlandı. Bir hafta sonra, hastanın istemsiz hareketleri ve kaygısının önemli derecede iyileştiği izlendi. Bu raporda, metoklopramidin muhtemel bir yan etkisi olan, akatizi sunulmuştur.

Anahtar sözcükler: Akatizi, metoklopramid, ilaca bağlı akatizi

Klinik Psikofarmakoloji Bülteni 2013;23(2):186-9

ABSTRACT:

Metoclopramide induced akathisia: a case report

Akathisia is an extrapyramidal movement disorder that is characterized objectively by an inability to sit or stand still and a subjective feeling of inner restlessness. Metoclopramide (MP) is a dopamine (D2) receptor blocker, which is widely used in emergency departments (EDs) in the treatment of patients with nausea and emesis. Like other drugs that are known to be dopamine receptor blockers, metoclopramide has been associated with extrapyramidal symptoms (EPS). Here the author presents a case of a 56 year-old male, who suffered from akathisia while being treated with MP within the therapeutic dose range for the short-term treatment of GERD. On admission to our clinic, he complained of restlessness and mental unease. Initially, MP treatment was stopped, and subsequently, diazepam 5 mg/day treatment was started. One week later the improvement in his involuntary movements as well as anxiety symptoms was impressive. In the present case report, akathisia, as a probable side effect of MP, is presented.

Key words: Akathisia, metoclopramide, drug-induced akathisia

Bulletin of Clinical Psychopharmacology 2013;23(2):186-9

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Gönderme tarihi / Date of submission: 16 Ocak 2011 / January 16, 2011

Kabul tarihi / Date of acceptance: 19 Nisan 2012 / April 19, 2012

Bağıntı beyanı:
A.O.I: Yazar bu makale ile ilgili olarak herhangi bir çıkar çatışması bildirmemiştir.

Declaration of interest:
A.O.I: The author reported no conflict of interest related to this article.

INTRODUCTION

Akathisia, or motor restlessness, is one of the most disagreeable extrapyramidal symptoms (EPS) characterized by a subjective sense of restlessness and associated movements (1,2). The Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994) deŞnes akathisia as a medication-induced movement disorder that is characterized by motor restlessness accompanied by increased nervous and restless movement (3). The underlying pathophysiological mechanism of akathisia is not well understood; although it is frequently attributed to dopamine-2 (D2) receptor blockade in the mesocortical areas (4,5).

Metoclopramide (MP) is a selective D2 receptor antagonist with central and peripheral antidopaminergic effects, which may be the most common cause of drug-induced movement disorders, including acute akathisia (5,6). A recent study reported the incidence of akathisia as 3.5% in

patients treated with MP alone (7). The average time period from initiation of treatment to the onset of EPS has been reported as 72 hours (8-10). Recent research suggests that drug induced akathisia (DIA) can start within hours or days of drug initiation, increase in dose, or change in type of drug, and even a single exposure to the drug should be sufficient for the diagnosis (8,11,12). More recent studies have suggested this relationship as well. A single case report of akathisia as a side-effect associated with MP is discussed below.

CASE REPORT

The subject in this study, a 56 year-old Turkish male, farmer by occupation, married and living with his wife on a farm, from a middle socio-economic status, presented to a state hospital with complaints of "uneasy sensation, unusually restlessness, feeling drowsiness and restless in his legs, for the past three days". According to the medical records, he was brought to the emergency department of Tarsus State Hospital with complaints of regurgitation, nausea, dyspepsia, and heartburn. After the initial investigation, the patient was diagnosed with gastroesophageal reflux disease (GERD). Treatment consisted of i.v. şuids. He stayed in the hospital for 4 hours and was discharged with a treatment of oral MP 30 mg/day for relief of his symptoms.

During the course of his outpatient treatment, he began to experience an inner sense of restlessness. This symptom, started within the second day of MP treatment at therapeutic doses. However, he had been taking 30 mg of MP orally each day for a period of 3 days. Soon thereafter, the restlessness became continuous and unbearable. On the third day, he was seen for the first time in our clinic on referral from his primary care provider. The patient was seen to be moving and unable to remain seated on a chair. He regarded these movements to be happening spontaneously and claimed to have no control. On the Barnes Akathisia Rating Scale (BARS) (13), he scored 9 (severe akathisia).

His mental status exam revealed a pleasant, cooperative man, who was alert and oriented to person, place, and date. He answered questions readily, although slowly. His mood was anxious and appropriate and he displayed a mood-congruent affect. He showed good judgment in general. He did not note any previous psychological or neurological problems in the history of himself or his family. He had never been treated with any dopamine-blocking agents or used any illicit drugs. He was a social smoker.

During admission, he underwent a number of investigations, which were all normal, including all routine blood sample tests, and brain magnetic resonance imaging (MRI). After other possible disorders, including general anxiety disorder, panic disorder, drug withdrawal states (such as opiates or cannabis), and restless leg syndrome were excluded, severe akathisia, possibly induced by MP, was diagnosed (3). Initially, MP treatment was stopped and the patient and his family were informed about the possible role of MP in his agitation. Later, diazepam 5 mg/day treatment was started. One week later, the improvement in his involuntary movements and anxiety symptoms was significant (Score on the BARS=1).

Subsequently, diazepam was gradually stopped within 7 days. Seven days after stopping diazepam, there was no re-emergence of akathisia or other EPS. The patient was scheduled for a follow-up appointment by the psychiatry outpatient clinic. During follow-up at 1 week and at 1 month, he remained well. The patient provided written informed consent.

DISCUSSION

Our patient received a diagnosis of "Medication Induced Movement Disorder Not Otherwise Specified" for several reasons (3). Our patient's symptoms correlated with the use of MP, a drug that is known to cause akathisia, and could have been worsened due to the MP treatment (9,11). Initially, on the Barnes Akathisia Rating Scale (BARS) (13), he scored 9 (severe akathisia).

As in present case, subjective symptoms are typically present before motor signs (1). The

subjective symptoms of akathisia are closely akin to anxiety, which can lead to the mistaken conclusion that they are an exacerbation of the original mental illness (1,11). The diagnosis of DIA is largely clinical, as has been demonstrated previously (4,5,11). As a result, there are no relevant laboratory tests to support it and therefore, diagnosis relies on a high index of suspicion on the part of the clinician.

In the present case, the main differential diagnoses we considered were general anxiety disorder, panic disorder, and drug withdrawal states (such as opiates or cannabis). If this had been a form of panic disorder or general anxiety disorder, we would have expected his symptoms to continue after the MP therapy was discontinued (3). In addition, the long duration of the patient's episodes of distress was not suggestive of panic attacks. Because he did not meet the DSM-IV criteria (3) for either panic disorder or general anxiety disorder and was found to have normal blood tests, we decided on akathisia secondary to MP therapy as our working diagnosis. The reported frequency of EPS associated with MP varies from 5% to 9% to 25% (11,12,14). In another study of 1,031 reported cases of MP induced movement disorders, 10% included akathisia (14). Acute akathisia may develop within minutes after drug intake or within a few days of the dosage being increased (6,9,11,13). In our case, akathisia occurred two days after taking MP orally.

Acute dystonic reactions, the most common type of EPS associated with MP, occur in approximately 0.2% of patients (1 in 500) treated with 30 to 40 mg of MP per day (15). As our case illustrates, the adverse effects of the drug can be seen at normal doses. Side-effects can be not only related to dose, but also to individual factors regardless of dose (1,14,15). These results are compatible with our case report.

On diagnosis, the offending or suspected drug should be withdrawn or the dose should be reduced, if possible. As in our case, benzodiazepines are commonly used to treat akathisia (10,11). Also, acute akathisia may resolve within 24 hours following drug discontinuation (4,5). In this case, MP treatment was stopped and diazepam 5 mg/day treatment was started. Our patient showed complete clinical recovery as far as the involuntary movements and anxiety symptoms were concerned, within seven days after starting diazepam (Score on the BARS=1).

Very few clinicians who have routinely prescribed MP inform their patients about possible EPS. Patients should also be informed and educated about the symptoms of MP induced side effects in order to prevent future occurrences.

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