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Olgu Sunumu / Case Report

Extrapyramidal Syndromes such as Oromandibular Dystonia, Akathisia, Parkinsonism as a Consequence of Paroxetine Use: A Case Report

Paroksetin Kullanımının Bir Sonucu Olarak Oromandibular Distoni, Akatizi, Parkinsonizm: Bir Olgu Sunumu

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Abstract

Selective serotonin reuptake inhibitors (SSRI) are frequently used in the treatment of many psychiatric disorders such as major depressive disorder, anxiety disorder, and eating disorders. Side effects such as increased appetite, constipation, dry mouth, sedation, restlessness, sweating and sexual dysfunction due to SSRI use are frequently reported, while extrapyramidal syndromes (EPS) such as akathisia, dystonia and parkinsonism are rarely seen. There are reports of SSRIs such as fluoxetine, sertraline and fluvoxamine-induced EPS. We hereby report a 37-year-old male case of EPS such as oromandibular dystonia, akathisia, parkinsonism that developed after a chronic use of paroxetine 30 mg/day and its improvement with dose reduction. In this patient, paroxetine was discontinued as dose-reduced paroxetine was not sufficient to treat anxiety symptoms, and the use of escitalopram significantly reduced psychiatric symptoms.

Keywords: Paroxetine, akathisia, parkinsonism, dystonia, SSRI, extrapyramidal syndrome

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Selektif serotonin geri alım inhibitörleri (SSGİ) major depresif bozukluk, anksiyete bozukluğu, yeme bozuklukları gibi birçok psikiyatrik hastalığın tedavisinde sıklıkla kullanılmaktadır. SSRI kullanımına bağlı iştah artışı, kabızlık, ağız kuruluğu, sedasyon, huzursuzluk, terleme, cinsel işlev bozukluğu gibi yan etkiler sıklıkla bildirilirken akatizi, distoni, parkinsonizm gibi extapiramidal sendromlar (EPS) nadiren görülmektedir. Fluoksetin, sertralin ve fluvoksamin gibi SSGİ'lere bağlı EPS bildirimleri bulunmaktadır. Burada, uzun süredir paroksetin 30 mg/gün kullanan 37 yaşındaki erkek hastada ortaya çıkan oromandibular distoni, akatizi, parkinsonism gibi EPS yan etkilerinin doz azaltımı ile iyileşmesini sunduk. Bu hastada dozu azaltılmış paroksetin anksiyete semptomlarını tedavi etmeye yeterli olmadığı için paroksetin kesildi ve essitalopram kullanımı ile psikiyatrik semptomlar belirgin olarak azaltıldı.

Anahtar Kelimeler: Paroksetin, akatizi, parkinsonizm, distoni, SSGİ, ekstrapiramidal sendrom

INTRODUCTION

Although antipsychotic-induced extrapyramidal syndrome (EPS) has been well recognised anatomical, physiological and neurochemical, the mechanisms of antidepressant-induced EPS have not been fully understood. The first report on antidepressant-induced EPS was published in 1959, but until the widespread use of Selective Serotonin Reuptake Inhibitors (SSRI) in the 1980s, no significant studies have been conducted in this area. Epidemiological studies suggest that EPS occur in about 1 per 1000 adult patients managed by SSSRIs (1). The most commonly reported EPSs associated with SSRI use are akathisia and dystonia. Parkinsonism, tardive dyskinesia and tremor have been reported in decreasing frequency (2). There has been an increasing number of reports of the development or aggravation of movement disorders associated with

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exposure to the SSRIs such as fluoxetine, paroxetine, sertraline, fluvoxamine and citalopram (1, 2). In this case report, we present a 37-year-old male who developed EPS while using paroxetine. We discuss the clinical features, aetiology and significance of this rare clinical condition..

CASE PRESENTATION

A was 37-year-old, married, teacher, male patient was admitted to the psychiatric outpatient clinic with complaints of decreased bodily movements, slurring of speech, restlessness, contraction of chin and tongue. The patient's complaints started two weeks ago and he was admitted to the emergency department twice. It was learned that biperidene 5 mg/day intramuscular (IM) administered in the emergency department decreased complaints but resumed within 48 hours. He was using paroxetine 30 mg/day per oral (PO) for two years due to anxiety symptoms in our psychiatric outpatient clinic. She had been in remission for one and a half years and was taking the same dose of medication regularly. Her father was diagnosed with schizophrenia. General and systemic examination was within normal limits. Mental status examination revealed a decreased psychomotor activity and anxious affect. A diagnosis of generalized anxiety disorder was made according to Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) (3). The patient's thyroid and liver function tests were within normal limits. The fasting blood glucose, protein level and lipid profile were within normal limits. Chest X-ray and electrocardiogram gave normal results. The patient and relatives stated that there was no change in dietary and fluid intake in recent days. The patient had no drug use other than paroxetine. He had no systemic disease such as hypertension or diabetes mellitus. A history of smoking, alcohol and substance abuse was not available. Drug-induced EPS was considered due to SSRI use and the dose of paroxetine was reduced to 20 mg/day. The patient managed by biperidene 2 mg twice a day and propranolol 40 mg twice a day. EPS ceased two weeks after paroxetine dose reduction Biperidene and propranolol doses were gradually reduced and discontinued within one week. No additional treatment was applied for adverse effect. As the patient's anxiety symptoms persisted, escitalopram 5 mg/day was started and paroxetine dose was decreased and

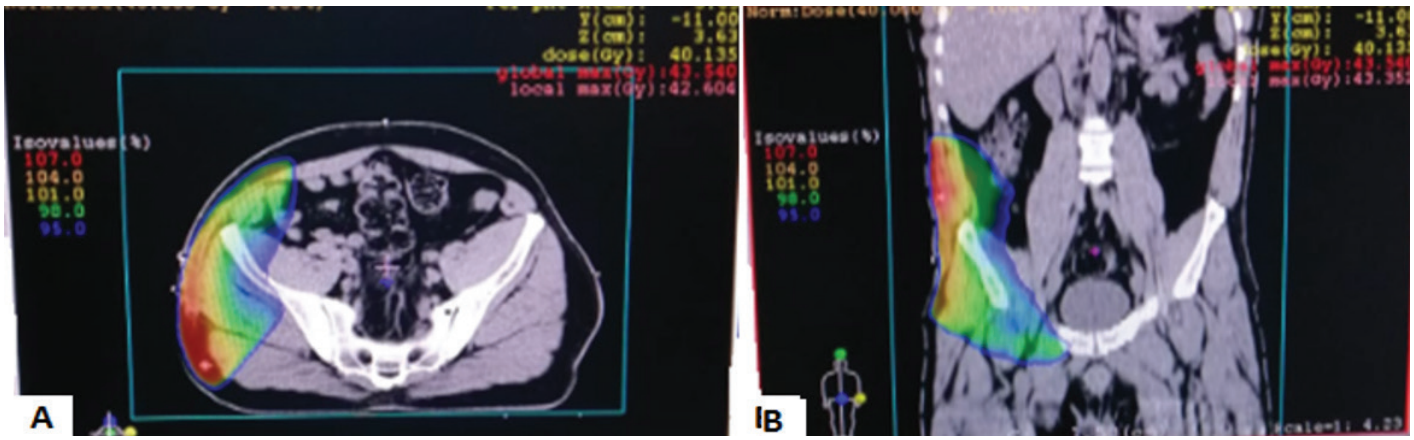

Figure 2. A= Axial tomodensitometric sections of 3 cm thick: Dose distribution of the patient's 3D radiation
B=Frontal tomodensitometric section : dose distribution of the patient's 3D radiation

discontinued. One month after the escitalopram dose was increased to 15 mg/day, the patient's anxiety symptoms improved significantly. The patients and their relatives were informed about the effects and possible side effects of the treatment. No similar side effects were reported during the follow-up of the patient. The patient and his relatives were warned about EPS due to paroxetine use and informed consent was obtained from them for their knowledges. Naranjo Adverse Dug Reaction Probability Scale (NADRPS) score of the patient was 7 (4).

DISCUSSION

Paroxetine is a SSRI and has common side effects such as constipation, dizziness, drowsiness, nausea, loss of appetite, xerostomy, as well as rare side effects such as EPS (5). This case report was evaluated as a case of EPS due to paroxetine. Because there was a temporal relationship between them, the side effect completely cured after dose reduction of the drug. Morphological factors of EPS were excluded. The NADRPS score indicates a probable association between drug use and side effect (4). The mechanism by which paroxetine could cause EPS has not been fully elucidated. However, it was speculated that a relationship with interactions between serotonergic and dopaminergic neurotransmitter systems may play a role paroxetine-induced EPS.

Meltzer et al. (6) resented the first evidence of possible pathophysiological mechanisms. They suggested an inhibition of both nigrostriatal and tuberoinfundibular dopaminergic neurons after exposure to fluoxetine (6). Dopamine cells project predominantly to the

nigrostriatal system. Nigrostriatal dopamine activity is mainly inhibitory and is balanced by the excitatory action of acetylcholine and by the inhibitory actions of γ-aminobutyric acid (GABA). Serotonin-containing neurons are known to be restricted to clusters of cells lying in or near the midline or raphe regions of the pons and upper brain stem. Moreover, the nucleus accumbens simultaneously receives dopamine projections from the ventral tegmental area and serotonin projections from the dorsal and median raphe nuclei, suggesting a dopamine-serotonin interaction at this level (1, 2).

Although specific approaches have been developed for the treatment of SSRI-induced EPS, it should be reasonable to manage these side effects in a similar way to antipsychotic-induced EPS. Particular attention should be paid to people who have reported a history of EPS due to psychotropic use. Patients should be evaluated frequently for side effects. Dose increases should also be more cautious (1). If an EPS side effect occurs, the accused drug should be discontinued or dose reduced. If these interventions fail, the drug should be replaced. The use of anticholinergic drugs for Parkinsonism is recommended. Again, anticholinergic drugs are also useful in dystonia. β-blockers can be useful in patients with akathisia and postural tremor (2). World Health Organisation (WHO) defines 'probable' as an event or laboratory test abnormality, with reasonable time relationship to drug intake. WHO also says this relationship cannot be explained by disease or other drugs, response to withdrawal clinically reasonable, rechallenge (not necessary) (7). Factors influencing patients with psychiatric disorders' compliance with medication include patient-related influences, physician-related variables, factors related to the patient's environment, treatment-related factors, and side effects. The influence of side effects has been demonstrated in patients' noncompliance with treatment. Sometimes, despite the side effects, some patients continue to be exposed to the drug. The level of functioning of the relatives of the patients, psychiatric or medical diseases which they have should be taken into consideration (8). For these reasons we have warned the patient and relatives about this side effect.

As a result, this case report suggests that physicians and relatives should be aware that paroxetine may induce EPS with a low quality of life and low compliance. Further systemic research should be conducted with respect to paroxetine-associated EPS to provide a greater understanding of both its prevalence and aetiology.

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