

FLUOXETINE:INDUCED TREMORS - A CASE REPORT

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Abstract: Fluoxetine is the most frequently used antidepressant in clinical practice and has been found to be effective in premenstrual syndrome, fibromyalgia, obesity, hypochondriasis and chronic pain etc. Fluoxetine induced tremors are reversible and rarely present as a life threatening situation. A case of fluoxetine induced tremor in a young female patient is reported here.

INTRODUCTION

Fluoxetine is a racemic mixture of R-fluoxetine and S-Fluoxetine in equal proportions. Both are approximately equipotent in serotonin reuptake inhibition activity, though the S-Fluoxetine enantiomer is more slowly eliminated and is therefore the predominant form in plasma at steady state. Fluoxetine is a specific serotonin reuptake inhibitor (SSRI) presumed to be working by desensitising both inhibitory somatodendritic and terminal 5-HT autoreceptors, thus increasing central nervous system 5-HT synaptic transmission. It is used in major depressive disorder, bipolar disorders, dysthymic disorder, seasonal affective disorder, trichotillomania, obsessive compulsive disorder, bulimia nervosa, panic disorder, social phobia, premature ejaculation, chronic fatigue syndrome and fibromyalgia^{1,2}.

CASE REPORT

A 35 years old married female patient nondiabetic, nonhypertensive vegetarian presented with tremors of both hands for the last 10 days. She also had history of inability of carrying out routine daily activities with hands. Her medical record revealed that she had been earlier diagnosed to be a case of depressive disorder and was on Fluoxetine (Flx) 20 mg daily. She developed tremors 15 days after taking (Flx). There was no history of head trauma, cerebrovascular accident, no signs/symptoms suggestive of thyrotoxicosis and Parkinsonism. There was no family history of tremors or any other movement disorder. On physical examination, pulse was 90/min, regular; BP 130/80 mmHg; Respiratory rate 18/min. Her mental status examination revealed depressive mood, decreased motor activity and suicidal tendencies. The frequency of finger tremors of both hands was 10 Hz, which increased on holding arms in an outstretched position in front of body. Tremors did not involve speech, head, tongue, jaw or trunk. She had no other extrapyramidal deficits. Her laboratory investigations revealed Hb 12.7g%, TLC 6800/mm³, DLC P-68, L-32, E-0, B-0; Blood Urea 35 mg/dl, serum creatinine 0.9 mg/dl, ECG within normal limits, urine examination normal. Lipid profile, thyroid functions, CT Brain were normal. Keeping in view her history, laboratory investigations and consumption of Fluoxetine, a diagnosis of Flx-induced tremors was made. She was advised to discontinue Flx and instead put on amitriptyline 50 mg twice daily i.e. tricyclic antidepressant. She showed marked improvement within 6 days of stopping Flx and her tremors disappeared. However, after one and a half months, she again presented with the previous complaints and on enquiry she confided that she had again started taking Flx for one month following its discontinuation. Amitriptyline 50 mg twice daily was restarted and she showed remarkable improvement. At 3 months follow up, she was symptom free and is now on regular follow up.

DISCUSSION

Flx is the most frequently used antidepressant in day to day clinical practice. It is a specific serotonin reuptake inhibitor and acts by desensitising both inhibitory somatodendritic and terminal 5-HT autoreceptors, thereby increasing central nervous system 5-HT synaptic transmission. Tremor is commonly encountered a side effect of many drugs. Drug induced tremor is most characteristically a postural or action tremors interfering with activities of daily living. Flx is also found to be effective for the management of premenstrual syndrome, fibromyalgia, hypochondriasis, obesity and chronic pain etc^{1,2}.

The elimination half life of Fluoxetine is 1-3 days after short term administration and 4-6 days following long term administration. Flx is reported to cause many side effects including tremor and akathisia like manifestation characterised by agitation, restless motor movements, dysphoria, pacing and internal sense of desperation and suicidal tendencies. Use of high doses may cause a syndrome resembling frontal lobe syndrome and syndrome of inappropriate secretion of antidiuretic hormone (SIADH). Tremor is uncommonly reported side effect during Flx therapy³ and following its withdrawal⁴. A case of Flx induced tremors has already been reported⁵.

Numerous drugs stimulate the peripheral adrenergic system directly and produce an enhanced physiologic tremor. Physiologic tremors increase in amplitude with the use of drugs like epinephrine, norepinephrine, theophylline, beta blockers, levodopa, amphetamines, caffeine and steroids. The mechanism of action of these drugs is to act directly on peripheral beta receptors. Neuroleptics exaggerate physiologic and essential tremors and can cause tardive tremor in addition to Parkinsonism tremor.

CONCLUSION

In clinical practice, it should be kept in mind that any depressed individual with history of tremor hands, fluoxetine intake as a possible cause must be thought of since these Flx induced tremors are reversible and rarely present as a life threatening situation.

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