Case Report

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Escitalopram induced bradycardia and syncope at therapeutic dose– A case report

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Abstract:

Escitalopram is an antidepressant belonging to the class of selective serotonin reuptake inhibitors (SSRIs). It is used to treat anxiety and major depressive disorder in adults and adolescents who are at least 12 years old. Common side effects include drowsiness, dizziness, insomnia, nausea, weight changes, and decreased sex drive.We report this case of escitalopram induced bradycardia and syncope for its rarity.

Key words: bradycardia; escitalopram; syncope

Introduction:

Escitalopram is a selective serotonin reuptake inhibitor (SSRI). It works by restoring the balance of serotonin, a natural substance in the brain, which helps to improve certain mood problems.

Selective serotonin reuptake inhibitors (SSRIs), widely prescribed medications for the treatment of depression, obsessive-compulsive disorder,bulimia,anorexia nervosa, panic disorder, anxiety, and social phobia, have a high therapeutic to toxicity ratio. However, although they are associated with less toxicity than tricyclic antidepressants (TCAs), they are often involved in co-ingestions that can precipitate the potentially lethal serotonin syndrome (SS).

SSRI toxicity and other adverse drug reactions can occur with overdose, in combination with other medications, or, infrequently, at therapeutic doses.

Cardiovascular effects most commonly include sinus tachycardia, flushing, hypertension, and in rare cases, hypotension. Dose dependent QT prolongation has been reported with citalopram [1,2]. Because of the risk for QT prolongation, revised prescribing was announced in August 2011 [3]. Citalopram is contradicated in individuals with congenital long QT syndrome, and the dose should not exceed 40mg daily.

Due to the high levels of serotonin in gastric and intestinal mucosal enterochromaffin cells, the most common minor adverse effects of SSRI therapy are gastrointestinal; eg abdominal cramping, nausea, and diarrhea. SSRIs have also been shown to moderately increase the risk of upper gastrointestinal bleeding [4].

Side effects from SSRIs are not age specific, but they may occur more in elderly persons who are more likely to be taking several serotonergic agents or other medications that alter cytochrome P-450 metabolism.

Case Report:

A 46 year hypertensive male,serviceman by occupation, presented to medicine OPD with complaints of giddiness for the last two weeks.No history of transient blackout of vision, abnormal movements, fainting spells, neck pain, paresthesias, weight lifting, visual blurring or ENT complaints.Also patient is previously asymptomatic,is non smoker,non diabetic,non alcoholic and not a known case of coronary artery disease or any other chronic illness.The patient is hypertensive for the last 5 years and was taking tablet Amlodipine 5mg daily and his blood pressure was well controlled.Since last one month patient was having stress and was having anxiety for which he consulted psychiatrist who prescribed him Tablet Escitalopram 10mg once daily. After taking Escitalopram for one week the patient noticed giddiness and near syncope off and on which were not related to exertion or posture.On detailed examinationof cardiovascular,CNS,abdomen and respiratory systems were within normal

limits.Ophthalmic and ENT examination yielded no abnormality.Investigations results of complete blood counts,renal,liver,thyroid functions were normal.Chest x-ray and echocardiographic studies were normal.ECG showed sinus bradycardia without any concomitant significant changes of ischemia like ST and T wave changes,there was no sinus pause or past evidence of myocardial ischemia/infarction, no LBBB, QTcinterval was<440msec. Xray cervical spine was within normal limits. Holter monitoring was unremarkable and treadmill test for reversible ischemia was negative. Viral markers for HIV, HBsAg, antiHCV were negative and urine and stool examinations were unrevealing.

Discussion:

Escitalopram causes effects similar to those of other SSRIs in overdose, with the major manifestation being serotonin toxicity[2].Bradycardia and hypotonia have been previously reported with citalopram, but there are only a few case reports about these side effects induced by a therapeutic dose of escitalopram. Both central and - by directly inhibiting the entry of Calcium into vascular smooth muscles resulting in vasodilatation - peripheral effects of escitalopram are supposed to be responsible for these rare phenomena.

Our case report has serious and very rare manifestations of bradycardia and near syncope/syncope at therapeutic dosage inspite of the patient being on amlodipine which results in tachycardia.

Patient Education:

All patients started on SSRIs by psychiatrists or primary care physicians should be educated about symptoms of serotonin toxicity and Serotonin Syndrome.

Patients should be counseled about potential interactions among any medications they take—including over-the-counter medications (particularly dextromethorphan-containing cold remedies), illicit drugs (especially amphetamines, MDMA, cocaine, and mescaline), and herbal dietary supplements/nutraceuticals (eg, St. John's wort, ginseng, and S-adenosyl-methionine)—that might affect the patient's tissue concentrations of serotonin.

Learning Objective:

An escitalopram overdose may be associated with serious cardiac arrhythmias, including QT prolongation and torsades de pointes. Prior to initiating therapy with selective serotonin reuptake inhibitors, health care providers should obtain a detailed prior medical history to uncover patients at high risk for previously undiagnosed QT prolongation. A screening electrocardiogram may be warranted prior to beginning a selective serotonin reuptake inhibitor.

Conclusions:

Citalopram should be used with care in the elderly and in persons with a history of heart disease. Heart rate and blood pressure should be monitored in the first week of therapy and when doses are modified.

Conflict of Interests:

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