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Tamsulosin Induced Hypersensitivity Reaction-A Case Report and Review of Literature

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Abstract: *Tamsulosin is widely used to treat BPH in adult. Postural hypotension is infrequent, dizziness and retrograde ejaculation are the only significant side effects. We report here, a 75yrs old man known hypertensive with coronary artery disease and recently diagnosed with Benign prostatic hypertrophy (BPH), who developed hyper sensensitivity reactionwith Tamsulosin therapy to relieve urinary symptoms. Early recognition and prompt withdrawal of the drug led the patient to lesser morbidity.*
Keywords: *Tamsulosin , postural hypotension , coronary artery disease , Benign prostatic hypertrophy(BPH).*

I. Introduction

Tamsulosin is widely used uroselective alfa blocker,to relieve urinary symptoms in BPH patients.Postural hypotension is infrequent,dizziness and retrograde ejaculation are the only significant side effects.[1] in this study,we report a case of tamsulosin induced hypersensitivity reaction.

II. Case Report

A 75 years old man presented with urinary obstructive symptoms.He was known hypertensive and coronary artery disease.He was on treatment with losartan potassium and anti anginal drugs for last 15 years.He was underwent cataract surgery 5years ago and he was suffering with osteoarthritis of knee joints for last 5 years. Patient is known allergic to cotrimoxazole.

For his urinary problems,he consulted urologist.After clical and physical examination ,urologist diagnosed as BPH and prescribed Tamsulosin once a day dose .patient was taking the drug regularly. On second day, patient complained mild dyspnea,heaviness in chest,mild dizziness in chest and generalized edema. There was no rash and other complaints.

Literature was reviewed. such adverse events were not found in the literature except dizziness.so patient was advised to continue same .on third and fourth day,symptoms were worsen.on examination ,there was generalized edema without rash significantly.so the patient was advised to stop medicine tamsulosin. Within 24 hours, patient was happy and comfortable.

III. Discussion

Urinary obstruction caused by BPH has a static component due to increased size of prostate and a dynamic component due to increased tone of bladder neck/prostate smooth muscle.[1] Two classes of drugs are available for the treatment of BPH.1.) α_1 adrenergic blockers to decrease tone of prostatic/bladder neck muscles. 2) 5 α reductase inhibitors to arrest groth /reduce size of prostate.[1]

Tamsulosin is uroselective α_{1A} adrenergic antagonist, primarily located on bladder neck and urethra.It has a better bioavailability than prazosin.Though plasma half life is 8hrs, its sustained release capsules (0.2 - 0.4mg) can be used for once daily dosing.It is more efficacious for the treatment of BPH with little effect on Blood pressure.[2.1]

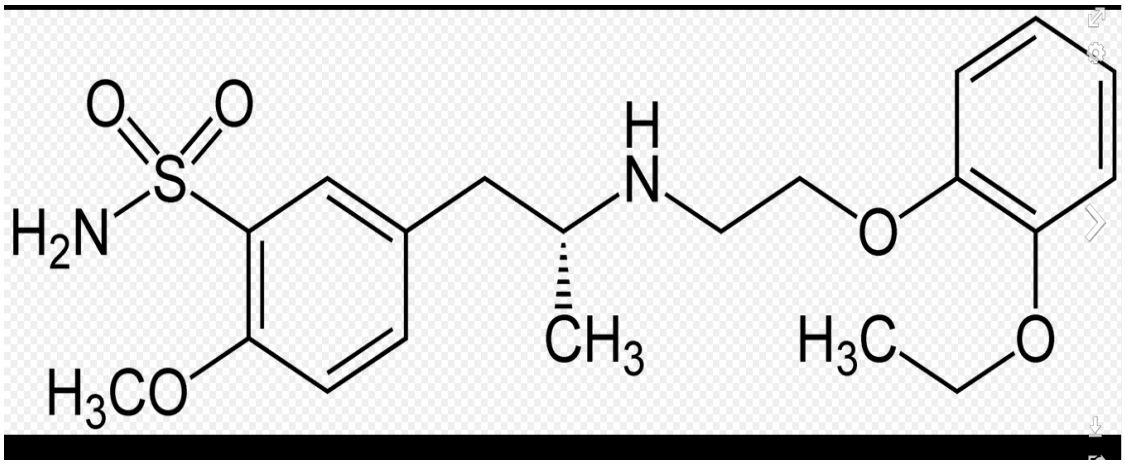
Considering mechanism of action, when α_1 receptor in bladder neck and prostste are blocked.this causes relaxation in smooth muscle and therefore less resistance to urinary flow. Due to this,the pain associated with BPH can be reduced[3].

Tamsulosin can be used for BPH and can also assist the passage of kidney stones by the same mechanism of smooth muscle relaxation via alpha antagonism[4,5].

Abnormal ejaculation and intra-operative floppy iris syndrome (which creates problems during cataract surgery)are the major side effects[2].no increase in adverse cardiovascular events has been noted. Postural hypotension is infrequent,dizziness and retrograde ejaculation are the only significant side effects[1].

Tamsulosin chemically is a sulfonamide drug.Its IUPAC name is (R) -5-(2-{(2-(2-ethoxyphenoxy)ethyl)amino}propyl)-2-methoxy benzene-1-sulfonamide. As it contain sulfa moiety,thus causes typical reaction to sulfa drugs[3]. So those who are sensitive to sulfa drugs, are sensitive to tamsulasin.

Structure of Tamsulosin



IV.Conclusion

In this study,patient got hypersensitivity reaction to Tamsulosin dueto sulfa moiety present in the side chain of Tamsulosin. So other alfa blockers,doxazosin,terazosin,alfuzosin,silodosin can be useful in sulfa drug sensitive BPH patients[6-11].These alfa blockers are not having sulfa moiety in its structure.

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