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Case Report

Sitagliptin induced acute severe nasopharyngitis

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ABSTRACT

Acute nasopharyngitis is one of the distressing adverse effects seen with the use of dipeptidyl peptidase-4 inhibitors like sitagliptin. Here, we report a case of acute severe nasophryngitis with the use of sitagliptin for diabetes mellitus.

Keywords: Sitagliptin, Adverse effects, Nasopharyngitis

INTRODUCTION

Unlike severe fatal or life-threatening case reports, this case draws our attention because of emergence of extensive use of dipeptidyl peptidase-4 (DPP-IV) inhibitor analogues in India and also worldwide. With high prevalence of diabetics in our country, number of population using DPP-IV inhibitor will be more and possible association of trivial but distressing DPP-IV inhibitors associated nasopharyngitis could result in temporary functional upset of mankind, operational failure in any organization, economic loss, etc.

Hereby, we are reporting a case of sitagliptin induced acute severe nasopharyngitis in 52 years old women who was prescribed with sitagliptin 100 mg once daily for diabetes.

CASE REPORT

A 52-year-old woman was presented to our clinic with history of severe burning sensation in throat, difficult and painful swallow, cough, and rhinorrhea for the last 3 days and symptoms were progressive. Patient also had same complaints about 10 days before and had homemade remedies, attained symptomatic relief. On examination, patient was febrile, throat examination show congested pharynx, tonsils and uvula, few follicles over pharynx, two small ulcers over nasopharynx. No exudates seen. Ear examination was normal.

A complete history was obtained, which revealed patient was diagnosed to have diabetes mellitus for the last 5 years and was prescribed tablet metformin 500 mg BD. About 4 weeks preceded to the current presentation, she was switched over from metformin to sitagliptin 100 mg once daily by her endocrine consultant. After having the new medication for 2 weeks, patient had symptoms of nasophayngitis and treated herself. However, she had second episode of nasophayngitis during 3rd week of treatment.

All blood reports were normal including blood sugar. Drug induced nasopharygitis was suspected and Naranjo analysis revealed score of 6 (probable adverse drug effect). Diagnosis of sitaliptin associated nasopahyngits was made and Patient was described antihistamincs, expectornats, tablet roxithromycin 300 mg BD to prevent secondary bacterial infection. Patient was followed and she recovered completely after 5 days.

Patient was asked to consult her endocrinologist to review her medication for diabetes.

DISCUSSION

Sitagliptin is a DPP-IV inhibitor, though approved in October 2006 by FDA recently gained much attraction for diabetes mellitus. Next to the metformin, DDP-IV inhibitors are popular in terms of oral dosage form, with little or no attendant risk of hypoglycemia and to promote weight loss among diabetics.[1,2] Side-effects noted with sitagliptin in various clinical trials were nausea, respiratory tract infection, cough, diarrhea, etc. Post marketing surveillance of sitagliptin also revealed an association with few cases of pancreatitis.

Sitagliptin induced to nasophayngitis is attributed to accumulation of substances such as substance P, eotaxin, neuropeptide Y, etc. in respiratory mucosa, causing congestion and ulceration. Similar mechanisms were also elucidated with the use of angiotensin-converting enzyme (ACE) inhibitors due to accumulation of bradykinins. In a cohort study, conclusion was made other DPP-IV inhibitors have been reported to cause "upper respiratory infections" in about 5% of type II diabetics and subset of clinically defined allergic rhinitis subjects had worsening of their symptoms plus fatigue when given sitagliptin.[3,4] There is also synergistic effects of ACE inhibitors induced accumulation of endogenous peptides with simultaneous use of sitagliptins,[5-7] this is very significant due to the fact that many number of patients with hypertension and diabetes might be prescribed sitagliptins and one of the ACE inhibitor by their treating physicians.

This suspected adverse effect was duly reported to our regional pharmacovigilance center, through pharmacovigilance unit of our institution.

CONCLUSION

Incidence of acute nasopharyngitis is more with the use of DPP-IV inhibitors like sitagliptin, caution should be taken when prescribed for patients with already established allergic rhinitis or concomitant use of drugs like angiotensin converting enzyme inhibitor.

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