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Case Report

MONTELUKAST-INDUCED EPISTAXIS

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Abstract: Montelukast is a cysteinyl leukotreine receptor antagonist. It is used for the maintenance treatment of asthma and to relieve symptoms of seasonal allergies. It is regularly prescribed in cases of persistent asthma. Here we report a case of a patient who developed an adverse drug reaction of bleeding per nose during the course of the treatment with montelukast for exacerbation of asthma.

Key words: Montelukast, leukotriene receptor antagonist, epistaxis, asthma

INTRODUCTION

Montelukast (singulair) is an antiasthmatic drug belongs to the leukotriene antagonist. It blocks the action of leukotriene D4 on the cysteinyl leukotriene receptor CysLT1 in the lungs & bronchial tube. Thus reducing the bronchoconstriction.[1] Montelukast has two indications: as adjunctive treatment for mild-to- moderate chronic asthma when regular inhaled steroid therapy and short acting inhaled beta 2 stimulants "on demand" are inadequate and in prevention of effort-induced asthma. The potential advantages of montelukast include clinically insignificant adverse reactions, safe and well tolerated and once-daily dosing profile. Here, we report a case of 2-years-old boy who developed epistaxis to montelukast when used as maintenance therapy for bronchial asthma.

CASE REPORT

A two years old boy was diagnosed of exacerbation of asthma and was admitted to pediatric emergency hospital. The patient presented with the history of high fever 102-104^{o}c, shortness and difficulty in breathing, eczema and vomiting. The child was treated with intravenous fluids, Amoxycillin + Clavulanic acid (Augmentin) syrup 15ml twice daily, bronchodilator fluticasone propionate + salmeterol (Seretide) inhaler, paracetamol and after 6 days of treatment, the patient was discharged.

On discharge he was advised to continue with the prescribed treatment of montelukast (Singular) 4mg chewable tablets once a day, Augmentin suspension, Fluticasone propionate + Salmeterol (Seritide) vacutainer 50mg 2 puff twice a day.

Since the child was allergic to cold, animal danders, grass, milk, banana, egg, nuts and was having repeated attacks of asthma, so he was asked to take singular and seretide daily without fail. 2 years after taking the prescribed medication regularly, the mother noticed bleeding nose, on 2-4 occasions within a week. A boy from same school of his who was on the same medication of montelukast for 2 years had same complains of bleeding nose this was observed by patient's mother. So she consulted the general physician and he advised them to discontinue montelukast but to continue with the seretide inhaler. The patient immediately discontinued montelukast chewable tablet. After the discontinuation of montelukast regular follow-up was done for a period of 6 months, there was no adverse sequela of epistaxis.

DISCUSSION

Leukotreine results from the action of 5-lipoxygenase on arachidonic acid and are synthesized by a variety of inflammatory cell in the airway LTD_4 causes bronchoconstriction, increases bronchial reactivity and mucosal edema. Montelukast is LTD_4 Receptor blocker it reduces frequency of asthma exacerbation.

A multicenter study was conducted in children aged 2-5 years with persistent asthma to determine the safety profile, it showed that montelukast 4mg chewable tablet was well tolerated with extended benefits.[2] Several studies have also been reported that there was a significant improvement in asthma with montelukast. And it was generally well tolerated with an adverse event profile comparable with that of placebo.[3,4,5]

In our patient, systematic approach was followed to determine whether the suspected adverse drug reaction (ADR) was actually due to the drug or a result of other factors. Naranjo's causality scale was used to determine casual relationship between epistaxis and treatment with montelukast. The following criteria were taken into account: epistaxis had developed following prolonged use of montelukast, the patient was normal before intake of drug (score +2). There were no episodes of adverse reaction of epistaxis after discontinuation of the drug, there was an immediate and marked improvement (score +1). And there were no alternative causes such as exposure to heat,

vestibulitis or nose picking that could have caused bleeding per nose (score +2) and preventive measures to allergies was taken by avoiding the allergens. Hence it was considered that epistaxis was "probably" caused by montelukast (Naranjo's total score +5). WHO-uppsala monitoring center (UMC) causality assessment criteria also indicated a probable association.

To the best of our knowledge, this is the first reported case of epistaxis with montelukast use. Practitioners should be aware of this rare but a potential adverse event of epistaxis, when montelukast is used for prolonged period as in maintenance therapy.

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