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Case Report

Rosuvastatin induced pruritus and dizziness: a case report

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ABSTRACT

Drug-associated adverse reactions can manifest with a wide range of symptoms. Some are widely reported, while others are less commonly observed. This case report describes a 36-year-old woman who was prescribed rosuvastatin to manage her elevated triglyceride levels and experienced adverse effects like pruritus and dizziness within ten days of starting the medication. After discontinuing rosuvastatin, her dizziness resolved immediately, and the pruritus diminished over the following two weeks, eventually subsiding completely. This case underscores the importance of considering Rosuvastatin-related adverse effects when evaluating patients with similar complaints.

Keywords: Rosuvastatin, Statins, Pruritus, Dizziness, Adverse effects

INTRODUCTION

Pruritus is an uncomfortable sensation that triggers an irresistible urge to scratch and can stem from a variety of internal factors, such as infections, endocrine disorders, or metabolic diseases. External factors like food, irritants, or allergens can also elicit pruritus. Common causes of itching include conditions like eczema, contact dermatitis, and urticaria. Certain medications can also induce pruritus.[1]

Dizziness can arise from a variety of underlying medical conditions or external factors, and it is characterized by a sensation of light-headedness, faintness, or unsteadiness. To determine the etiology of dizziness, it is essential to conduct a comprehensive medical history and physical examination of the patient. Given that dizziness can be a side effect of certain medications, it is crucial to carefully review the patient's pharmacological regimen when they present with such symptoms.[2]

Statins are a class of lipid-lowering medications that inhibit the enzyme hydroxymethylglutaryl-CoA reductase. They are frequently prescribed due to their ability to reduce low-density lipoprotein cholesterol levels, thereby helping to prevent cardiovascular disease in patients with dyslipidemia. However, statins can also be associated with common adverse effects such as muscle pain, liver toxicity, and fatigue.[3]

This case report describes a rare instance of a female patient prescribed rosuvastatin for hyperlipidemia, who experienced pruritus and dizziness within ten days of starting the medication. Both symptoms resolved after the discontinuation of rosuvastatin.

CASE REPORT

A 36-year-old woman presented to the outpatient department with generalized itching. Her past medical history included obesity, hyperlipidemia, and hypertension. Her current medications were amlodipine and calcium supplements. Approximately 10 days prior, she had been initiated on rosuvastatin for the management of hyperlipidemia. Since then, she had also experienced episodes of light-headedness.

The decision was made to discontinue rosuvastatin for a few days to monitor any changes in her symptoms. After two days, the patient returned for follow-up, reporting

complete resolution of her dizziness. Her itching had also subsided. A thorough skin examination revealed resolving excoriations on her back, arms, and thighs, without any other primary or secondary skin lesions. Daily application of an emollient cream was recommended to moisturize her skin.

The patient's history and clinical presentation, including the resolution of symptoms after discontinuing rosuvastatin, confirmed a diagnosis of rosuvastatin-induced pruritus and dizziness. Following the daily use of an emollient cream and significant improvement in her symptoms, the pruritus fully resolved within two weeks. Rosuvastatin was then reintroduced after a comprehensive discussion with the patient, and her symptoms reappeared within 4 days.

Rosuvastatin was eventually replaced with gemfibrozil, and the patient was followed up without any systemic or cutaneous reactions to the new medication.

DISCUSSION

Rosuvastatin is a statin medication utilized to manage elevated cholesterol and triglyceride levels. The prescribed dosage is tailored to the individual patient's baseline lipid profile, typically ranging from 5 to 40 milligrams per day. Potential adverse effects associated with rosuvastatin therapy include increased creatinine kinase and liver enzyme levels, as well as the development of myopathy, renal failure, and rhabdomyolysis.[4]

Pruritus, or itching, has been reported in some patients receiving rosuvastatin treatment. A 30-year-old man with a history of high cholesterol and heart attack experienced an anaphylactic reaction, including pruritus, to both atorvastatin and simvastatin independently.[5] Similarly, a 29-year-old woman with familial hypercholesterolemia developed an allergic reaction to atorvastatin and simvastatin, and subsequently experienced pruritus and flushing after starting rosuvastatin for desensitization.[6] Pruritus has also been observed in patients receiving combination therapy of rosuvastatin with either ezetimibe or telmisartan.[7,8]

Research indicates that East Asian individuals tend to have higher plasma levels of certain statins and their active metabolites compared to Caucasian populations. Consequently, clinicians have considered recommending lower statin dosages for East Asian patients, who may be at greater risk of adverse effects when prescribed higher doses.[3]

Rosuvastatin-induced dizziness has been documented in several studies. For instance, among 12 patients who were started on rosuvastatin, two developed dizziness.[9] Similarly, a study involving 172 patients reported dizziness in two individuals.[10] In a study with 36 patients receiving either fimasartan or rosuvastatin, one patient experienced dizziness.[11] Additionally, a study with 42 patients on rosuvastatin observed dizziness in one case.[8] Other reports also highlight individual instances of dizziness related to rosuvastatin use. In a study involving rosuvastatin, dizziness and edema were noted as the most frequent adverse events, each occurring in 1.2% of patients. In cases where dizziness was observed, one participant who received only rosuvastatin had dizziness attributed solely to the drug. Dizziness was also noted in patients receiving olmesartan individually or in combination with rosuvastatin.[12]

Postural dizziness was linked to both rosuvastatin and fimasartan, with dizziness occurring in one patient taking 20 mg of rosuvastatin daily and one patient on both 20 mg of rosuvastatin and 10 mg of ezetimibe daily.[11,12] Additionally, dizziness was reported in one patient on 20 mg of rosuvastatin daily, three patients on 80 mg of telmisartan, and one patient on placebo.[8]

Pharmacokinetic studies indicate that East Asian patients may have higher plasma concentrations of statins and their metabolites compared to Caucasians, suggesting the need for lower statin doses to mitigate the risk of adverse effects such as myopathy and rhabdomyolysis.[3]

Dizziness and pruritus are not unique to rosuvastatin alone; other statins, including atorvastatin, fluvastatin, lovastatin, pravastatin, and simvastatin, have also been associated with these symptoms. In a study of 1,690 participants on various statins, 103 (4.8%) experienced pruritus, and 94 (4.4%) experienced dizziness.[13]

In the case report mentioned, our patient was re-challenged with rosuvastatin to confirm the association with her symptoms, which was affirmed. Switching to gemfibrozil for hyperlipidemia resulted in no adverse reactions. According to the Naranjo scale for adverse drug reactions, her symptoms of pruritus and dizziness both received a score of 10, indicating a ‘definite’ probability that these reactions were due to rosuvastatin.

Naranjo scale score for dizziness and pruritus

The Naranjo scale assigns scores as follows: a score of 9 or higher indicates a ‘definite’ association between the symptoms and the drug in question, score of 5-8 suggests a ‘probable’ reaction, total score of 1-4 indicates a ‘possible’ reaction, and a score of 0 or below denotes a ‘doubtful’ association (Table 1).

Our patient’s score of 10 confirms a ‘definite’ link between her dizziness and pruritus and rosuvastatin. This conclusion is supported by the temporal sequence of the symptoms following rosuvastatin administration, the recognized response to the drug, confirmation through withdrawal and re-challenge, and the absence of alternative explanations for her clinical state.[14]

Few studies have documented the simultaneous occurrence of pruritus and dizziness following the

initiation of rosuvastatin therapy.[15] Nonetheless, clinicians should remain vigilant, as new symptoms may indicate an adverse drug reaction. Healthcare providers need to recognize these potential side effects and monitor patients accordingly.

Table 1: Questions.

Question	Yes	No	Do not know	Patient score
Are there previous conclusive reports on this reaction?	+1	0	0	+1
Did the adverse event appear after the suspected drug was administered?	+2	-1	0	+2
Did the adverse event improve when the drug was discontinued or a specific antagonist was administered?	+1	0	0	+1
Did the adverse event reappear when the drug was re-administered?	+2	-1	0	+2
Are there alternative causes that could on their own have caused the reaction?	-1	+2	0	+2
Did the reaction reappear when a placebo was given?	-1	+1	0	+1
Was the drug detected in blood or other fluids in concentrations known to be toxic?	+1	0	0	0
Was the reaction more severe when the dose was increased or less severe when the dose was decreased?	+1	0	0	0
Did the patient have a similar reaction to the same or similar drugs in any previous exposure?	+1	0	0	0
Was the adverse event confirmed by any objective evidence?	+1	0	0	+1
Total score	10			

CONCLUSION

Rosuvastatin has been associated with various adverse effects. Although less common, dizziness and pruritus can emerge following the initiation of rosuvastatin treatment. Our case report describes a 36-year-old female patient who developed both pruritus and dizziness within ten days of starting rosuvastatin. Upon discontinuation of the medication, her dizziness resolved promptly, and her pruritus significantly improved within two weeks. To the best of our knowledge, the concurrent occurrence of rosuvastatin-induced pruritus and dizziness has been reported only in a few cases before. In addition to rosuvastatin, pruritus and dizziness have been observed in patients receiving other statin medications too. Consequently, clinicians should consider the possibility of a statin-related etiology when a patient present with new-onset dizziness, generalized pruritus, or both.

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