

Case report

Pantoprazole induced generalized edema

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Abstract

Proton pump inhibitors (PPI) such as pantoprazole are widely used in clinical practice for the treatment of reflux esophagitis, peptic ulcer disease, upper GI bleed, and Zollinger-Ellison syndrome. In general, PPIs are well tolerated with only minor side effects. Here, we report three cases of generalized edema due to oral pantoprazole. *Key words* Pantoprazole, proton pump inhibitor, generalized edema.

Case reports

Case-1

A 45 year old lady was started on pantoprazole for acute gastritis. She had hypertension for which she was taking S-amlodipine, 5 mg once daily. She did not have any other co-morbid illness. On 4th day of taking pantoprazole, she developed generalized edema, which was more prominent over the face and lower limbs. Her renal, liver, and thyroid function tests were normal. Her ECG and echocardiograms were also within normal limits. She was not taking any other drug except S-amlodipine before coming to us. S-amlodipine was suspected to be causing generalized edema and stopped. Edema persisted even after stopping S-amlodipine, but gradually regressed after stopping pantoprazole. Edema recurred after rechallenging the patient with pantoprazole.

Case-2

A 55 year old man was admitted for the management febrile illness. The exact cause of fever was not known even after extensive workup. He received empirical parenteral ceftriaxone along with oral doxycycline. He was

also started on oral pantoprazole for his dyspeptic symptoms. He became afebrile after 14 days of antibiotic therapy, but developed

generalized edema during the course of hospital stay. He did not have any organ failure or fluid overload which could explain the edema. His thyroid function tests were within normal limits. Edema persisted for two weeks after he became afebrile and even after stopping all the drugs except pantoprazole. Edema gradually regressed over 4 days after stopping pantoprazole.

Case-3

A 22 year old man with vivax malaria was started on chloroquine, paracetamol and pantoprazole as an outpatient. When he came back for follow up 3 days later, he had developed facial puffiness, scrotal and bilateral lower limb edema. His renal, liver, cardiac and thyroid functions were normal and he was not on any other drug which could cause generalized edema. Edema regressed after stopping pantoprazole.

Discussion

PPIs are one of the most commonly prescribed drugs worldwide¹. PPIs are substituted benzimidazoles that inhibit gastric acid secretion by covalently binding to the proton pump (H⁺/K⁺ ATPase). The presence of various types of H⁺/K⁺ ATPase in various tissues could contribute to non-gastric effects. The most common adverse events of PPIs are headache, diarrhea, and nausea, dizziness and fatigue^{2,3}. Pantoprazole is generally well tolerated and adverse events are usually mild and transient^{4,5}. There are also few

reports of skin reactions, hepatotoxicity, interstitial nephritis, pancytopenia, leucopenia, thrombocytopenia and anaphylaxis. Generalized edema due to omeprazole has been reported previously^{6,7}. Extensive review of literature showed only one case report of generalized edema due to pantoprazole which occurred while giving parenteral pantoprazole infusion in a patient with pyloric stenosis⁸. All the previous reports of generalized edema due to PPIs occurred with intravenous route of administration.

Herein we report 3 cases of generalized edema which occurred in patients on oral pantoprazole. It is important for clinicians to be aware of this side effect of pantoprazole so that it can be stopped early to prevent further complications. The exact mechanism of edema formation due to PPIs is not known. Further research is needed to define the exact mechanism of edema formation.

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