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ANAPHYLAXIS CAUSED BY TAKING PANTOPRAZOLE: CASE SERIES

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ABSTRACT

Introduction: Pantoprazole is one of the most widely used proton pump inhibitors, but anaphylaxis occurs rarely during its use. The purpose of reporting these two cases is to show that pantoprazole is not a drug without problems; it can also cause anaphylactic reactions.

Cases description: A 42-year-old woman presented to the emergency department due to dyspeptic complaints. Immediately at the end of the infusion of pantoprazole, there started to be numbness of the tongue, itching all over the body, and difficulty in breathing. Half an hour after taking a pantoprazole 40 mg capsule, a 58-year-old woman started to experience redness of the face, thickening of the tongue, itching, bloating, and dizziness. Arterial pressure was 80/60 mmHg, pulse 150/minute, while saturation had dropped to 88%. In both cases, fluids, adrenaline, antihistamines, methylprednisolone, and calcium were immediately started. After the improvement of their general conditions, both patients were discharged home.

Discussion: The first case relates to anaphylaxis after the intravenous administration of pantoprazole, and the second case relates to the appearance of anaphylaxis after its oral administration.

Conclusion: Health workers need to be informed about the possibility of anaphylaxis in patients taking both oral and parenteral pantoprazole.

KEYWORDS

Anaphylactic reaction, pantoprazole, proton pump inhibitors

LEARNING POINTS

- PPIs are generally safe, with a low percentage of side effects of 1–3%.
- Although hypersensitive reactions to PPIs are rare, cases of anaphylactoid reactions have also been reported in the literature.
- Anaphylaxis caused by taking pantoprazole should be considered in the differential diagnosis of anaphylaxis in both oral and parenteral administration of the drug.
- Doctors and pharmacists should be very careful when prescribing pantoprazole and other PPIs, especially to the elderly.

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INTRODUCTION

Proton pump inhibitors (PPIs) are widely used for the treatment of gastrointestinal diseases. PPIs are generally safe, with a low percentage of side effects of 1–3%[1]. The most common side effects are diarrhoea, headache, nausea, dizziness, and skin changes. Serious effects during the use of PPIs can include non-allergic ones (cytopenia, vasculitis, acute interstitial nephritis, hepatitis, and cutaneous lupus erythematosus) and allergic ones (anaphylaxis, contact and photoallergic dermatitis, drug rash with eosinophilia and systemic symptoms (DRESS), Steven Johnson syndrome, and toxic epidermal necrolysis). Unfortunately, these reactions can be life-threatening.

A number of case reports have reported anaphylactic reactions following PPI use. The incidence of anaphylactic reactions in PPI and histamine 2 receptor antagonists (H2RA) together has been reported to be only 0.2–1.04%[2]. This is attributed to over-prescription and large-scale counter sales. Their use is not recorded in the medical history, which causes them to be unregistered and unreported. The reactions that appear after the use of PPIs can also be delayed[3]. Although hypersensitive reactions to PPIs are rare, cases of anaphylactoid reactions have also been reported in the literature[4]. Here we present two patients with anaphylactic reactions to pantoprazole, one after oral use and the other after parenteral use. We also browsed literature related to this topic.

Case 1

A 42-year-old woman was admitted to the emergency department due to dyspeptic complaints. After the visit with the attending physician, she was given 40 mg of pantoprazole dissolved in 100 ml of 0.9% NaCl. Immediately after the end of the infusion, there started to be numbness of the tongue, itching all over the body, and difficulty in breathing. Arterial pressure was 90/60 mmHg, oxygen saturation 89%, and pulse 140/minute. The administration of ampoules of chloropyramine hydrochloride and methylprednisolone was started immediately. The patient began to improve and after 4 hours was discharged home in an improved condition. After this time, she took ranitidine as well, but reacted with an allergy. Now she only uses baking soda, nothing else. Family and life anamnesis was unremarkable. The patient wants to do the pantoprazole allergy skin test, but after her previous bad experience with pantoprazole, she is afraid to do it.

Case 2

Half an hour after taking a pantoprazole 40 mg capsule, a 58-year-old woman began to experience redness of the face, thickening of the tongue, itching, bloating, and dizziness. Arterial pressure was 80/60, pulse was 150/minute, and saturation had dropped to 88%. Antihistamines, adrenaline, methylprednisolone, and calcium were immediately administered. After stabilisation of the condition, the patient was discharged home in good condition. Because of this experience, she took dexamethasone, chloropyramine hydrochloride, and calcium for three days. After ceasing to take these drugs, she started complaining of shortness of breath and redness on her face. She has been taking prednisone every day for a week. In the meantime, for reflux complaints, she started taking famotidine tablets, but this also caused side reactions. With rabeprazole, her condition has settled completely, and she continues to take it from time to time as needed.

From the anamnesis, we learned that she had a cholecystectomy 4 years ago. She denied that anyone in the family has such an allergy. Similar to the first patient, this patient also refused to take the skin test for allergy to pantoprazole.

DISCUSSION

We have reported two cases of anaphylaxis after the use of pantoprazole. While the first case relates to anaphylaxis after the intravenous administration of pantoprazole, the second case relates to the appearance of anaphylaxis after its oral use.

Because of the fear caused by anaphylaxis after the use of pantoprazole, it was not possible to convince the patients to take a skin test for pantoprazole.

Acute and delayed allergic reactions, as well as systemic manifestations, have been described in the literature after both oral and intravenous use of pantoprazole.

Moreover, Gupta et al. have reported two cases of anaphylactic reactions after an oral intake of 40 mg of pantoprazole[5].

Yadav et al. have reported anaphylactic shock in a 40-year-old woman one and a half hours after taking a tablet of 40 mg of pantoprazole. Her stay in the hospital was uneventful, and she was discharged after 24 hours[6].

Here we should also mention a case of anaphylaxis after the oral intake of 40 mg of pantoprazole tablets by a 39-year-old woman. Skin testing to pantoprazole confirmed the suspicion and she was advised to avoid this drug[7].

The study of Ozdemir et al., who described 60 patients who developed hypersensitivity reactions after oral PPI intake, should also be mentioned. Lansoprazole was the drug most suspected of causing hypersensitivity, in 14 patients (68.1%), followed by pantoprazole in 12 patients (20%). Anaphylaxis was the most frequent clinical presentation (66.7%)[8].

In addition to the usual manifestations, the use of pantoprazole can also appear in the form of Kounis syndrome. This syndrome is identified by hypersensitivity and coronary artery disorder due to different environmental factors, drugs, and PPIs[9].

There are also many cases of anaphylaxis reported in the literature after the parenteral use of pantoprazole, which appears much faster than after taking it orally.

Faridalee and Ahmadian Heris reported an anaphylactic reaction in a 21-year-old with gastritis hospitalised in the emergency unit after IV administration of 40 mg of pantoprazole. The patient was discharged after 12 hours in good condition[10].

Kakode et al. presented a 38-year-old man with symptoms and signs of anaphylaxis 10 minutes after intravenous administration of 40 mg of pantoprazole. Before that, the same person had allergic reactions twice after taking pantoprazole orally. This case report emphasises the importance of taking an anamnesis related to known allergies in the patient before prescribing the drug, along with the importance of the patient's self-awareness to inform the doctor about their allergies[11].

Bahaguna et al. report the case of a 64-year-old woman with symptoms and signs of anaphylaxis after the intravenous administration of 40 mg of pantoprazole. Intravenous administration of pantoprazole was stopped immediately and she was stabilised for several hours[12].

Hesam Yousefi has reported a case of anaphylactic shock reaction three minutes after the intravenous administration of pantoprazole. The anaphylactic shock was managed with normal saline, intramuscular epinephrine, intravenous hydrocortisone, antihistamines, and oxygen. After 24 hours, she was discharged home[13].

Especially for the elderly, pantoprazole should be prescribed with caution. A 75-year-old woman developed anaphylaxis a few minutes after receiving an intravenous infusion of pantoprazole. The side effect was noticed in time and the patient was successfully resuscitated[14].

CONCLUSION

Doctors should be very careful when prescribing pantoprazole and other PPIs. Special attention should be paid to the education of patients regarding the possibility of side effects when taking PPIs in any form, oral or intravenous. However, since these reactions can be life-threatening, it is very important that doctors and medical personnel are aware of the possibility of anaphylaxis when taking pantoprazole and that they carefully monitor the patient during and after receiving the pantoprazole injection. It is imperative that clinicians are aware of this adverse effect that might occur with pantoprazole and hence be more cautious when prescribing the drug, especially to the elderly.

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