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Anaphylaxis to omeprazole

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Omeprazole reduces both basal and stimulated gastric acid secretion by specific binding to the parietal cell proton pump H^+/K^+ -adenosine triphosphatase.¹ It seems to be effective in the treatment of peptic ulcer disease, reflux esophagitis, and the Zollinger-Ellison syndrome.

Adverse reactions to omeprazole reported so far in clinical studies are nausea, diarrhea, paresthesia, dizziness, and headache. After the registration, adverse reactions observed and reported include endocrine adverse effects, with symptoms of impotence and gynecomastia, acute interstitial nephritis, and arthralgias. Cutaneous adverse reactions attributed to omeprazole include acute disseminated

epidermal necrolysis, lichen spinulosus, rash,² contact dermatitis,³ and a case of angioedema and urticaria.⁴ We report on a patient with omeprazole-induced anaphylaxis.

CASE REPORT

A 47-year-old man was admitted to the hospital for treatment of nausea, vomiting, and abdominal pain. He did not smoke and had no history of diabetes mellitus, hypertension, or coronary artery disease. Six weeks before admission, he was treated with omeprazole, 20 mg daily by mouth, because of burning gastric pain. He discontinued this treatment because he had urticaria. He used no other drugs. Physical examination on admission revealed normal hemodynamics and a circumscribed pain without signs of peritonitis. No urticaria or other skin abnormalities were present. Laboratory results and electrocardiogram were normal.

On admission, because of severe pain, the patient was treated with nicomorphine, 10 mg, administered intravenously. The patient reported no complaints after this treatment. However, the next morning, he received 40 mg of omeprazole intravenously, and he had urticaria and angioedema, followed by hypotension (blood pressure

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unmeasurable) and unconsciousness within a few minutes after administration of the drug. There were no signs of respiratory failure at that moment. After another few minutes, asystole developed. The patient was successfully resuscitated, and hemodynamics were monitored in the intensive care unit for 1 day. After 1 day, he recovered without further complications. There were no signs of either acute myocardial infarction or pulmonary embolism. No tryptase level was measured.

Several weeks after discharge, cutaneous tests were performed. A prick test with omeprazole (4 mg/ml) resulted in a wheal and erythema at the test site within 10 minutes, comparable with the results of a histamine prick test. Omeprazole prick tests in control subjects did not cause a reaction.

DISCUSSION

Because the patient had urticaria, angioedema, and hypotension, an anaphylactic reaction seems to be the probable cause of the described symptoms. According to the temporal relationship, the positive reaction to rechallenge and the positive cutaneous test results, anaphylaxis was probably due to use of omeprazole in this patient. To our knowledge, this adverse effect of omeprazole has never been reported in the literature.

Anaphylaxis is an acute reaction, which occurs within 1 hour after exposure to a substance and which can involve the cardiovascular system (e.g., hypotension), the respiratory system (e.g., bronchospasm), the skin (e.g., urticaria), and the gastrointestinal system (e.g., diarrhea). In The Netherlands, drug-induced anaphylaxis is probably most frequently caused by penicillins, analgesics, and nonsteroidal antiinflammatory drugs.⁵

Because of the rapid occurrence of anaphylaxis after administration of omeprazole and the occurrence of urticaria, we believe that this case represents a type I or IgE-mediated allergic reaction. Omeprazole is almost completely metabolized after absorption and rapidly eliminated in the urine. However, because the reaction occurred immediately after intravenous administration of omeprazole and because the results of prick tests were positive, the allergic reaction was probably to omeprazole itself and not to a metabolite.

Although omeprazole-induced anaphylaxis is probably rare, physicians should be aware of this possibility, especially in a patient with urticaria who is treated with omeprazole. Early recognition of an anaphylactic reaction is important, because a serious reaction, or even death, can occur within minutes to hours after the first symptoms appear.

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Allergy to supplemental lactase enzyme

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Lactose intolerance results from deficient production of lactase enzyme, so ingested lactose is available for fermentation by gut bacteria, which

results in cramping and diarrhea. This affects approximately 18% to 20% of the general population. Supplemental lactase enzyme obtained from fungal sources is commercially available for treatment. Milk pretreated with lactase enzyme (Lactaid and Lacteeze brand milk) is also available. This is the first case report of a patient who had allergic symptoms after the ingestion of supplemental lactase enzyme.

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