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A Rare Case of Pantoprazole Induced Anaphylactic Shock

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ABSTRACT

INTRODUCTION: Pantoprazole, a drug from the proton pump inhibitors group (PPI), is widely used for gastroesophageal disease and peptic ulcer. PPIs act on H⁺/K⁺-ATPase pump, the process needed for gastric acid secretion. Drug induced hypersensitivity is an immune mediated reaction. Drug hypersensitivity reactions are commonly encountered in clinical practice.

OBJECTIVE: The objective of reporting this case is to show that anaphylaxis reaction may occur with tablet pantoprazole.

CASE SUMMARY: A 40 year old female reported to emergency department in hemodynamically unstable condition, with a history of loose stool, vomiting, spasmodic abdomen pain, redness all over the body after approximate 1 and half hour back after ingestion of tablet pantoprazole 40mg.

Keywords: Anaphylaxis, Shock, Pantoprazole

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CASE: A 40 year old female presented to emergency department at 2:45 pm. She had history of consumption of tablet pantoprazole in morning at around 10am, after when she had 2-3 episode of loose stool and vomiting along with continuous spasmodic abdomen pain.

On arrival in emergency, her airway was patent, breathing was unlabored, symmetrical, bilaterally clear, respiratory rate was 18/min, spo2 -88% on room air, blood pressure was not recordable, peripheral pulses not palpable, pulse was 86/min, peripheries were cold and cyanosed, RBS-115mg/dl, GCS -E4V5M6, B/L pupils were reactive, urticarial with blanching present all over the body. In view of these findings, patient was triaged as 1 and immediately the management was started.

Immediately oxygen was administered/started. Large bore IV access were taken and 1litre normal saline bolus was administered. Immediately Injection 0.5mg of adrenaline (1:1,000) is given I.M in view of anaphylaxis. Injection pheniramine, hydrocortisone were also administered IV and ABG was sent.

Thereafter, blood pressure- 90/50mmhg was recorded, pulse rate- 110/min, respiratory rate of 17/min, chest- clear on auscultation, spo2 - 98% on 4litre of O₂. Since, the abdomen pain was persisting, injection buscopan 1amp in 100ml NS IV (slow) given.

After the primary survey her history revealed that the symptoms appear approx. 1 hour after the ingestion of table pantoprazole 40 mg and in past she never had this tablet. She confirmed that she had taken no other drug with pantoprazole

ABG showed hypokalemia, ECG- NSR. IV fluids were continued as maintenance drip and at 3:45 pm, BP-100/50mmhg, PR-100/min, SPO₂- 100% on 4litre of oxygen, however peripheries were remained cold and urine output of 400ml.

Patient was admitted in ICU and managed on supportive care. Her stay during this period was uneventful, and was discharged after 24 hours

in stable condition, with advised not to take tablet pantoprazole.

CONCLUSION: tablet pantoprazole can cause anaphylaxis reaction and health providers need to be cautious while prescribing it

DISCUSSION:

H₂-receptor antagonists, such as cimetidine, ranitidine and famotidine, are some of the most commonly prescribed medications for gastric acid-related disorders. These compounds are generally well-tolerated and anaphylactic reactions to them are rare. To date, only a few reports addressing cross-reactivity among H₂-receptor antagonists have been published².

A case report, by Haeney³, with cellulitis, ulcerative erosive esophagitis, and gastric and duodenal ulcers who developed several hypersensitivity reactions characterized by shortness of breath, wheezing, cough, mild angioedema, and total body urticaria and pruritus immediately after consuming 20mg of tablet omeprazole orally. It was also confirmed by the challenge test that the reaction was due to the drug by Bowlby and Dickens⁴.

Two case reported, by PP Gupta, In both cases presented, the patients developed acute episodes of urticaria, edema, and hypotension, and these were associated with the ingestion of the tablets, leading to their classification as anaphylactic reactions. Anaphylactic reactions are known as anaphylaxis, a clinical symptom, which is often life threatening and causes respiratory and cardiovascular problems. On encountering the drug which causes the anaphylaxis, proinflammatory mediators are released from the mast cells and basophils, leading to severe allergic conditions⁵.

Acid suppressive drugs not only influence the sensitization capacity of orally ingested proteins, but also represent a risk factor for food allergy patients. Additionally, gastric acid suppression was reported to increase the risk for development of drug hypersensitivity reactions. These consequences of anti-ulcer drug intake might on the one hand be

associated with direct influence of these drugs on immune responses. On the other hand reduction of gastric acidity leads to impaired gastrointestinal protein degradation. Nevertheless, also disruption of the gastrointestinal barrier function, changes in microbiome or lack of tolerogenic peptic digests might contribute to the connection between anti-ulcer drug intake and allergic reaction⁶. A few case reports suggest that pantoprazole may lead to anaphylactic shock⁷. A 50-year-old male in China also experienced anaphylactic shock due to IV injection of pantoprazole during general anesthesia⁸.

Conflicting Interest: None.

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