Anaphylaxis to Commonly Used Drug Oral Pantoprazole

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A 64-year-old nonalcoholic nonsmoker Hindu housewife female came to the emergency department with main complaints of knee and shoulder joint pain. The patient was attended by an orthopedic resident with a provisional diagnosis of osteoarthritis and received intramuscular injection diclofenac sodium 75 mg. The patient also took an oral capsule of pantoprazole 40 mg. She was under observation in emergency when she suddenly became restless and developed rashes and itching all over her body associated with profuse sweating, dizziness, and shortness of breath. She was attended by a medicine resident in the emergency department and on examination, her pulse rate was 120/min low in volume regular rhythm extremities cold, SBP was 80 mm Hg, respiratory rate was 22/min, SpO2 was 80% room air, and random blood sugar was 122 mg/dL. She was conscious-oriented, irritable, and had generalized erythema over her body. No pallor, cyanosis, icterus, clubbing or lymphadenopathy was present. Other systemic examination within normal limits (WNL). ECG showed sinus tachycardia only. The patient was diagnosed with drug-induced anaphylaxis (DIA) either due to oral pantoprazole or intramuscular diclofenac and managed with high flow oxygen at a rate of 10 L/min, intravenous normal saline drip, intramuscular 0.5 mL 1:1000 dilution (1 mg/mL) adrenaline, 200 mg of intravenous hydrocortisone sodium succinate. She became comfortable after 20–30 minutes with relief in symptoms of itching, rashes, and shortness of breath and her vitals got stable with a blood pressure of 120/80, pulse rate of 86 bpm good volume, SpO2 of 98% room air, respiratory rate of 18/min, and was shifted to general medicine ward.

On detailed history, the patient told that she had two episodes of itching and rashes after ingestion of an oral capsule of pantoprazole, first episode occurred 3-year back when the patient developed urticaria and dizziness 20 minutes after the dose without breathlessness and sweating at that time, her husband gave oral tab levocetirizine 10 mg with relief of symptoms after an hour at home. After this episode, she never took this medicine in the last 3 years, though she was taking tab diclofenac/etoricoxib off and on for joint pains during this period. The second episode occurred 10 days back when the patient went to the dispensary and ignorantly took this medicine as prescribed, patient developed itching, rashes, and dizziness which got relieved by oral levocetirizine within 2 hours. In her family, her husband was aware of the allergic reaction to oral pantoprazole capsule but this time the patient was brought...
by her son to our emergency department who was unaware of this allergy, and the patient herself did not pay attention in agony of pain and took this medication.

Laboratory parameters were Hb 12.5 gm/dL, TLC 11,700/cumm, DLC 81/14/4/0.9/0.1, PLT 363, blood urea 32 mg/dL, creatinine 0.8 mg/dL, total bilirubin 1.2 mg/dL, direct 0.5 mg/dL, indirect 0.7 mg/dL, SGOT 34 IU/L, SGPT 45 IU/L, ALP 86 U/L, CRP <6, and RA factor was nonreactive. X-ray of the chest and ultrasonography of the whole abdomen were WNL.

To indirectly confirm pantoprazole anaphylaxis, we ruled out diclofenac hypersensitivity which is more common. The patient was given tablet diclofenac in the ward with all emergency measures ready at hand and the patient did not show any untoward effect. With this, the patient was discharged the next day in vitally stable condition with the final diagnosis of anaphylactic hypersensitivity to pantoprazole.

**Discussion**

Proton pump inhibitors (PPIs) are commonly co-prescribed and overused agents not only by treating doctors but also by patients themselves many times in apprehension. Though PPIs are believed to be very safe, sober, and effective drugs they too can have some minor side effects such as nausea, abdominal pain, constipation, diarrhea, headache, and skin rashes. Sometimes even an innocent drug can show a dreaded reaction in an individual. Anaphylactic shock is such rare adverse reaction of PPI.

Gupta et al reported two cases of anaphylaxis due to oral pantoprazole 40 mg in 38 and 32 years old females with periorbital edema, urticaria, pruritus, nausea, vomiting, and difficulty in breathing 20–30 minutes after ingestion. Alolabi and Liem demonstrated pantoprazole hypersensitivity in a 39-year-old female who had symptoms of angioedema, pruritus, pyrexia, vomiting, and diarrhea after drug intake by epicutaneous testing of pantoprazole which yielded a positive reaction with a wheal diameter of 10 mm. Kakode and Kakode also noted adverse drug reaction by pantoprazole three times in a patient, out of which initial two episodes were due to oral pantoprazole leading to rashes and itching 2 months apart which were relieved by antihistaminic drugs, while the third episode occurred 3 months later to intravenous pantoprazole leading to anaphylactic shock.

Causality assessment of adverse drug reaction in our patient was done by Naranjo’s algorithm for causality assessment, which indicated it to be a “probable” side effect with a score of +8.

Antibiotics followed by analgesics nonsteroidal anti-inflammatory drugs (NSAIDs) and others are the common culprit drugs for DIA. Diclofenac sodium has lower rates of adverse reactions than any of the other comparative NSAIDs. In our case also a clear history of reaction to oral pantoprazole and witnessing no reaction to diclofenac salt in the ward confirms the anaphylactic reaction to be because of pantoprazole only though we did not do cutaneous testing as the husband of the patient did not give consent and it was not worth of testing this at risk of life.

**Conclusion**

Drug-induced anaphylaxis is an unanticipated severe allergic reaction. To negate this, the patient and their relatives should be educated and made aware to avoid further exposure to such noxious drugs. Interrogation of drug allergy should be a routine in the history taking of every patient. Furthermore, proper documentation of allergic reactions to a drug should be highlighted in their medical papers to avoid catastrophic events.

**References**