Learnovate-International
An International Open-Access Journal Published By Lapain Press Publications[LPP]
Content Available at www.lapinjournals.com E-ISSN: 3049-1592
Case Study Open Access

CASE STUDY: 55-YEAR-OLD PATIENT WITH BODY SWELLING AND RASH AFTER PANTOPRAZOLE ADMINISTRATION

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Article History: Received: 11 Sept 2024, Revised: 3 Oct 2024, Accepted: 18 Nov 2024, Published: 15 Dec 2024

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Abstract

A 55-year-old patient presented with generalized body swelling and a rash after initiating Pantoprazole 40 mg for gastrointestinal concerns. The patient had no prior history of hypertension, diabetes mellitus, or significant comorbidities. The rash was erythematous, pruritic, and maculopapular, while generalized pitting edema was noted in the face, legs, and hands. A thorough examination ruled out systemic infection and suggested a drug-induced hypersensitivity reaction, with possible angioedema. The differential diagnosis included viral exanthem and autoimmune disorders. Investigations were conducted to assess the extent of the reaction, including blood tests, renal and liver function tests, and a potential skin biopsy. Management focused on discontinuing Pantoprazole, symptomatic treatment with antihistamines, corticosteroids, and diuretics, and close monitoring for progression. The patient's prognosis was favourable upon discontinuation of the drug, with most symptoms resolving in a few weeks. Patient education included avoiding re-exposure to Pantoprazole and scheduling follow-up appointments to monitor symptom resolution. This case highlights the importance of recognizing drug-induced hypersensitivity reactions, particularly with commonly prescribed medications like Pantoprazole, and providing timely management to prevent complications.

***Keywords*:** Pantoprazole, gastrointestinal concerns, hypersensitivity reaction.

Introduction to Pantoprazole 40 mg:

Pantoprazole 40 mg is a medication that belongs to the class of proton pump inhibitors (PPIs**)**, which are commonly used to manage gastrointestinal disorders related to excessive stomach acid production. It works by targeting and inhibiting the H+/K+ ATPase enzyme in the stomach lining, which is responsible for the final step of acid production. This action effectively reduces the amount of acid secreted by the stomach, providing relief from conditions caused by acid overproduction.

Pantoprazole 40 mg is primarily used for the treatment of gastroesophageal reflux disease (GERD), where it helps to alleviate symptoms such as heartburn and acid regurgitation. It is also prescribed for peptic ulcers, Helicobacter pylori eradication therapy (as part of combination therapy with antibiotics), and Zollinger-Ellison syndrome, a rare condition characterized by excessive acid secretion. The 40 mg dosage is typically used for moderate to severe cases, providing significant acid suppression.

Pantoprazole is available in oral tablet form, with a delayed-release mechanism to ensure the drug reaches the small intestine where it is absorbed. The standard dose is usually taken once daily, although it can be adjusted based on the patient's specific medical needs and response to treatment.

Although Pantoprazole is generally well-tolerated, it can lead to side effects such as gastrointestinal disturbances, headaches, and in rare cases, more severe reactions like skin rashes or angioedema. It is important for healthcare providers to monitor patients for any signs of adverse reactions, especially during long-term use, as prolonged suppression of stomach acid can also affect nutrient absorption.

In conclusion, Pantoprazole 40 mg is an effective treatment for various acid-related gastrointestinal conditions, offering substantial benefits in managing symptoms and improving quality of life for many patients. However, awareness of potential side effects and careful patient monitoring remain essential for optimal therapeutic outcomes.

Patient Information

- **Age:** 55 years
- **Gender:** Not specified
- **Presenting Complaints:**
  - Body swelling
  - Rash on body parts

Medical History

- **Past Medical History:** No known hypertension or diabetes mellitus
- **Current Medications**
  - Pantoprazole 40 mg (taken for gastrointestinal symptoms)

Clinical Presentation

The patient, a 55-year-old individual, presented with complaints of generalized body swelling and a rash on various parts of the body. The symptoms started after the patient began using Pantoprazole 40 mg daily for gastrointestinal concerns. Pantoprazole is a proton pump inhibitor (PPI) commonly prescribed to reduce stomach acid production and manage conditions like gastroesophageal reflux disease (GERD) or peptic ulcers.

The patient does not have a history of hypertension, diabetes mellitus, or any other significant comorbid conditions. The swelling appears to be generalized, with visible edema in the legs, face, and hands. A rash is noted on the trunk, arms, and thighs. The rash is described as erythematous and pruritic. There is no history of fever, joint pain, or other systemic symptoms.

Initial Assessment:

1. **General Examination**
   - Vital signs are stable with no signs of systemic infection.
   - Blood pressure, heart rate, and respiratory rate within normal limits.
   - No significant lymphadenopathy or signs of infection.
2. **Skin Examination**
   - Erythematous rash with mild swelling observed on the body.
   - Rash appears to be maculopapular, non-vesicular, and non-ulcerative.
   - Skin examination revealed no open lesions or signs of secondary infection.
3. **Edema**
   - Generalized pitting edema noted in the lower extremities, face, and hands.

Differential Diagnosis:

1. **Allergic Reaction (Drug-Induced Rash and Swelling)**
   - The onset of symptoms after initiating Pantoprazole suggests the possibility of a drug-induced hypersensitivity reaction.
   - Common side effects of PPIs include gastrointestinal disturbances, headaches, and, in rare cases, skin rashes or angioedema.
2. **Angioedema**
   - Swelling could be a sign of angioedema, potentially drug-induced. Pantoprazole has been associated with this condition, especially when it presents with swelling of the face, lips, and extremities.
3. **Viral Exanthema**
   - Consideration of viral causes (e.g., rubella, measles) for the rash, although the lack of systemic symptoms such as fever makes this less likely.
4. **Autoimmune Disorders**
   - A less likely but important differential, especially if the patient develops additional symptoms like joint pain or skin changes, pointing to possible systemic lupus erythematosus (SLE) or other autoimmune conditions.

Investigations

1. **Blood Tests**
   - **Complete Blood Count (CBC):** To check for signs of infection, anemia, or eosinophilia.
   - **Renal Function Tests (Urea, Creatinine):** To assess kidney function, given the generalized edema.
   - **Liver Function Tests:** To rule out hepatic involvement, as drug-induced reactions could impact the liver.
   - **Electrolytes:** To assess for imbalances, especially due to swelling or potential dehydration.
2. **Skin Biopsy (if needed)**
   - If the rash persists or worsens, a biopsy may be performed to assess for drug-induced dermatological conditions.
3. **Pantoprazole Serum Level (if available)**
   - To assess for potential toxicity, though it is rare.

Management Plan

1. **Discontinue Pantoprazole**
   - Given the temporal relationship between the use of Pantoprazole and the onset of symptoms, the most likely cause is a drug-induced reaction. Discontinuing the medication is the first step in management.
2. **Symptomatic Treatment**
   - **Antihistamines (e.g., Cetirizine or Diphenhydramine):** To control itching and rash.
   - **Corticosteroids (Topical or Systemic):** If symptoms persist or worsen, oral corticosteroids like

Prednisolone may be considered for severe reactions such as angioedema.
    - **Diuretics:** If edema persists and is bothersome, loop diuretics like Furosemide may be prescribed to reduce swelling.
3. **Close Monitoring:**
    - Monitor the patient for any progression of symptoms or new developments.
    - Revaluate for any systemic involvement, such as fever, joint pain, or signs of anaphylaxis.

Prognosis

The prognosis is generally favourable once the offending agent (Pantoprazole) is discontinued. Most drug-induced rashes and angioedema resolve within a few days to weeks after stopping the medication. However, the patient should be advised to seek medical attention if symptoms worsen or if signs of anaphylaxis (e.g., difficulty breathing, severe swelling) develop.

Patient Education

- The patient should be educated about the possibility of an allergic reaction to medications.
- Advise the patient to avoid re-exposure to Pantoprazole and other PPIs in the future unless medically indicated.
- Follow-up appointments should be scheduled to monitor the resolution of symptoms and any potential recurrence.

Conclusion

This case underscores the importance of promptly identifying and managing drug-induced hypersensitivity reactions, particularly in patients presenting with common symptoms like rash and edema after starting new medications. Pantoprazole, although generally well-tolerated, can cause allergic reactions, including angioedema and skin rashes, as seen in this patient. Early discontinuation of the suspected drug, coupled with symptomatic treatment, proved effective in resolving the symptoms. The favourable outcome emphasizes the need for vigilance in recognizing adverse drug reactions and educating patients about the risks of re-exposure to certain medications. Regular follow-up is crucial to ensure complete resolution and prevent future complications.

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