

Iodixanol-Induced Hypersensitivity During Coronary Intervention: A Case Report

Druthi MS¹, Subhanita Roy¹, Kumar Masum^{1,*}, Sandeep Srinivas², Balakeshwa Ramaiah³

¹Doctor of Pharmacy, Department of Pharmacy Practice, Bangalore Baptist Hospital, Bengaluru, Karnataka, INDIA.

²MBBS, MD-Internal Medicine, DM-Cardiology, Bangalore Baptist Hospital, Bengaluru, Karnataka, INDIA.

³Department of Pharmacy Practice, Head of Department, Karnataka College of Pharmacy, Bengaluru, Karnataka, INDIA.

ABSTRACT

Iodinated contrast media, such as Iodixanol (Visipaque®), are dyes used to improve the clarity of blood vessels and organs during imaging procedures. Iodixanol is a non-ionic, iso-osmolar agent designed to be safer and better tolerated than older contrast dyes. We describe the case of a 48-year-old man with diabetes, high blood pressure, a past stroke, and a seizure disorder who presented with chest pain and was diagnosed with Acute Coronary Syndrome - Anterolateral Wall Myocardial Infarction. He underwent a heart procedure on the left anterior descending artery using Iodixanol. Soon after the dye was given, he developed itching, swelling around the eyes, and red raised patches on the skin, showing an allergic reaction with urticaria and angioedema. He was treated with intravenous antihistamines and steroids, and his symptoms improved. This case highlights that even safer contrast dyes like Iodixanol can cause allergic reactions, stressing the need for close monitoring and timely management.

Keywords: Adverse Drug Reactions, Contrast Media, Iodixanol, Visipaque.

Correspondence:

Dr. Kumar Masum

Doctor of Pharmacy, Department of Pharmacy Practice, Bangalore Baptist Hospital, Bengaluru, Karnataka, INDIA.
Email: masumkumar412@gmail.com

Received: 16-04-2026;

Revised: 08-06-2026;

Accepted: 27-07-2026.

INTRODUCTION

Iodinated Contrast Media (ICM) are widely employed in diagnostic and interventional procedures and are a recognized cause of adverse drug reactions ranging from mild cutaneous symptoms to severe hypersensitivity responses (Choi *et al.*, 2008). Despite its favourable safety profile, iodixanol has been rarely associated with clinically significant hypersensitivity reactions (Bottinor *et al.*, 2013). Delayed contrast-induced hypersensitivity reactions are rare and challenging to diagnose due to delayed onset and variable presentation and more comprehensive understanding of their incidence, associated risk factors, and optimal management strategies remains to be established (Molen *et al.*, 2025). Early recognition, timely management, and preventive measures help to reduce morbidity associated with radiocontrast reactions (Wang *et al.*, 2025). Additionally, consistent reporting of rare contrast-related adverse events is essential to enhance pharmacovigilance and support safer clinical use of ICM (Wang *et al.*, 2025).

CASE REPORT

A 48-year-old man came with complaints of chest pain, which was accompanied with radiating pain to both shoulders. He reported no episodes of dizziness, heart palpitations, or excessive sweating. His medical history included Type 2 Diabetes Mellitus (T2DM), Hypertension (HTN), and a history of stroke, as well as a seizure disorder. The patient was diagnosed with Acute Coronary Syndrome - Anterolateral Wall Myocardial Infarction (AWMI).

Procedure

Coronary angiography was performed via the right radial artery, which demonstrated single-vessel coronary artery disease involving the Left Anterior Descending (LAD) artery. The patient subsequently underwent a successful primary percutaneous coronary intervention, with stenting of the mid-to-distal LAD using a XIENCE XPEDITION drug-eluting stent (2.75 × 30 mm). Post-deployment angiography confirmed optimal stent expansion with restoration of normal distal flow, achieving Thrombolysis in Myocardial Infarction (TIMI) grade III flow.

Adverse Reaction

Visipaque® (iodixanol), a non-ionic, iso-osmolar iodinated contrast agent, was used for angiographic imaging during the procedure. Shortly after contrast administration through catheter, the patient complained of pruritus localized to the tip of the nose. During the procedure, the patient complained about itching over



DOI: 10.5530/ijopp.20260824

Copyright Information :

Copyright Author (s) 2026 Distributed under
Creative Commons CC-BY 4.0

Publishing Partner : Manuscript Technomedia, [www.mstechnomedia.com]

the nose tip and swelling of both the eyes. On examination patient had developed marked periorbital edema with puffiness (++) accompanied by multiple wheals over the neck and upper limbs post PTCA (as illustrated in Figures 1A and 1B). A dermatology consultation was promptly obtained and based on the onset of cutaneous and soft-tissue manifestations, acute urticaria with periorbital angioedema was diagnosed.

The patient had no prior history of hypersensitivity reactions or known drug allergies. Importantly, there were no signs of airway involvement, including voice alteration, stridor, or respiratory distress. The close timing of symptom onset after iodixanol administration indicated an immediate hypersensitivity reaction to the contrast medium.

Management

Management included administration of intravenous Antihistamine therapy with pheniramine (Avil) and intravenous corticosteroids in the form of hydrocortisone as shown in Table 1. Following initiation of treatment, the patient showed gradual resolution of cutaneous symptoms and reduction in periorbital edema. The patient was kept under close clinical observation to monitor for any recurrence or progression of symptoms, particularly airway involvement. No further hypersensitivity

reactions were noted, and the patient remained hemodynamically stable throughout the monitoring period.

DISCUSSION

Hypersensitivity reactions to ICM constitute a clinically important subset of adverse drug reactions, with manifestations ranging from mild, self-limiting cutaneous symptoms to severe, potentially life-threatening dermatological and systemic involvement (Choi *et al.*, 2008). Visipaque-induced acute urticaria with periorbital angioedema is predominantly mediated by non-IgE-dependent mast cell activation, resulting in histamine release and increased vascular permeability. Management with pheniramine maleate achieves rapid symptomatic relief through H1 receptor antagonism, while hydrocortisone suppresses inflammatory mediator release and capillary leakage, thereby reducing edema and preventing relapse (Bottinor *et al.*, 2013). It is associated with a lower incidence of adverse reactions compared with older high-osmolar agents, clinically significant hypersensitivity reactions continue to be reported in clinical practice (Bottinor *et al.*, 2013).

Delayed hypersensitivity reactions, including severe cutaneous adverse reactions, are uncommon and often underrecognized because they may develop hours to days after contrast exposure,



A



B

Figure 1: (A) Physical examination shows periorbital edema. (B) Physical examination of the patient shows wheals in the neck.

Table 1: Detailed Description of Adverse Drug Events.

Reactions	Drug	Onset of reaction	Duration of reaction	Causality assessment	Management
Acute urticaria	Iodixanol (Visipaque®)	Post PTCA	30 min	Severe/ probable	Inj. Phemiramine maleate 45.5 mg Inj. Hydrocortisone 100 mg

complicating causal attribution (Molen *et al.*, 2025). In the present case, an immediate contrast-induced hypersensitivity reaction was observed, characterized by acute urticaria with periorbital angioedema occurring shortly after iodixanol administration during coronary angiography and left anterior descending artery stenting in a patient with no prior history of drug allergy. The clinical presentation is consistent with previously reported cutaneous hypersensitivity reactions associated with iodixanol, underscoring the need for a high index of suspicion when dermatological manifestations arise in the peri-procedural period (Choi *et al.*, 2008, Molen *et al.*, 2025).

Current expert guidance emphasizes early recognition and appropriate management of contrast-induced hypersensitivity reactions, including prompt withdrawal of the offending agent, supportive care, and the use of systemic corticosteroids in severe cases (Wang *et al.*, 2025). Preventive measures such as careful patient history, risk stratification, and selection of alternative contrast agents may help reduce recurrence. However, allergic-type reactions can still occur despite these precautions, highlighting the limitations of prediction and prevention (Wang *et al.*, 2025). Systematic documentation and reporting of such adverse drug reactions remain essential to strengthening pharmacovigilance, improving clinical awareness, and promoting safer contrast media use (Bottinor *et al.*, 2013).

CONCLUSION

This case emphasizes how critical it is to identify and iodinated contrast media hypersensitivity reactions. Even though Visipaque (iodixanol) is regarded as a low-risk contrast agent, negative side effects are possible. In order to ensure timely intervention in the event of allergic manifestations, healthcare providers should maintain vigilance both during and after contrast administration. Future imaging procedures should be carefully planned, taking into account alternative imaging options or premedication for patients who are at risk.

ACKNOWLEDGEMENT

We acknowledge the Pharmacovigilance Programme of India (PvPI), coordinated by the Indian Pharmacopoeia Commission (IPC), for its role in strengthening medication safety. The reaction has been reported under unique ID: IN-IPC-301031613.

ABBREVIATIONS

ICM: Iodinated contrast media; **AWMI:** Anterolateral Wall Myocardial Infarction; **T2DM:** Type 2 Diabetes Mellitus; **HTN:** Hypertension; **LAD:** Left anterior descending; **PTCA:** Percutaneous Transluminal Coronary Angioplasty; **TIMI:** Thrombolysis in Myocardial Infarction; **PvPI:** Pharmacovigilance Programme of India; **IPC:** Indian Pharmacopoeia Commission.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

FUNDING

No financial support or sponsorship was received for this study.

PATIENT CONSENT / INFORMED CONSENT

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

REFERENCES

- Bottinor, W., Polkampally, P., and Jovin, I. (2013). Adverse reactions to iodinated contrast media. *International Journal of Angiology*, 22(3), 149-154. <https://doi.org/10.1055/s-0033-1348885>
- Choi, C. U., Rha, S. W., Suh, S. Y., Kim, J. W., Kim, E. J., Park, C. G., et al. (2008). Extensive exfoliative dermatitis induced by non-ionic contrast medium iodixanol (Visipaque®) used during percutaneous coronary intervention. *International Journal of Cardiology*, 124(2), 242-244. <https://doi.org/10.1016/j.ijcard.2006.11.218>
- Van der Molen, A. J., van de Ven, A. A. J. M., Vega, F., Dekkers, I. A., and Laguna, J. J. (2025). Rare delayed hypersensitivity reactions to contrast media: Severe cutaneous adverse reactions. *European Journal of Radiology*, 183, 111908. <https://doi.org/10.1016/j.ejrad.2024.111908>
- Wang, C., Ramsey, A., Lang, D., Copaescu, A. M., Krishnan, P., Kuruvilla, M., et al. (2025). Management and prevention of hypersensitivity reactions to radiocontrast media: A consensus statement from the American College of Radiology and the American Academy of Allergy, Asthma and Immunology. *Radiology*, 315(2), e240100. <https://doi.org/10.1148/radiol.240100>

Cite this article: Druthi MS, Roy S, Masum K, Srinivas S, Ramaiah B. Iodixanol-Induced Hypersensitivity During Coronary Intervention: A Case Report. *Indian J Pharmacy Practice*. 2026;19(4):554-6.