

THROMBOPHOB INDUCED ACUTE URTICARIA: A CASE REPORT*¹Dr. Aruna Bhushan, ²Dr. Indira Biswas and ³Swapna Karning¹Associate Professor, Department of Pharmacology, BIMS, Belagavi.²Prof and HOD of Biochemistry KPC Medical College Kolkata.³Intern, BIMS, Belagavi.

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ABSTRACT

Here, we report a case of a 47 year old female developed superficial thrombophlebitis on her dorsum of right hand for which she was prescribed topical thrombophob ointment and advised cold compression and elevation. Thrombophob is commonly used in treatment of blood clots after surgery or during blood transfusion, hematomas, phlebitis. Though it is commonly used, it does have adverse effects like erythema on the applied area but hypersensitivity reactions are not reported frequently.

KEYWORDS: Thrombophob, heparin, urticaria, allergy.**INTRODUCTION**

Thrombophob ointment is a combination of heparin and benzyl nicotinate. It is manufactured and marketed by Cadila, India. It is a common practice to use thrombophob in the hospital. Topical application is widely used for various conditions such as phlebitis, superficial thrombophlebitis, varicose veins, bedsores, haemorrhoids, contusions, hematomas and scars.^[1] Side effects are minimal like burning sensation, irritation which is experienced by some patients.

Heparin is highly sulfated polysaccharide that is used as anticoagulant. Heparin is also a linear glycosaminoglycan (GAG) with an average molecular weight between 15 and 19 kDa.^[2,3] Used in thromboembolic diseases for decades. However, in the past decade there is a rising concern about the safety and supply security of Heparin. An international heparin contamination crisis, which occurred in 2007 to 2008, was associated with more than 80 fatalities in US alone.^[4]

Benzyl nicotinate, 3- pyridine carboxylic acid phenylmethyl ester is a rubefacient. It relieves pain in muscles, joints and other non articular skeletal muscle conditions by its counter irritation action. Benzyl nicotinate improve skin oxygenation, induce dermatitis artefacta, cause hyperemia.^[5] It also causes vasodilatation enhances local heparin absorption. Both heparin and benzyl nicotinate are known to cause urticaria.^[6] Here, we report a case of 47 year-old female, who developed acute urticaria to topical thrombophob ointment.

CASE REPORT

A 47 year old female patient had undergone second cycle of chemotherapy. After 10 days, she complained of pain and swelling in the right hand at the intravenous (i.v) insertion site. She was diagnosed as thrombophlebitis swollen vein on right hand and pain along the right arm. Patient was advised topical application of thrombophob ointment twice daily and cold compression and arm elevation. After a day of use of thrombophob ointment she developed initially redness then rash, as shown in the "Fig. 1 and Fig. 2" itching and chest pain.

**Fig. 1: Showing Redness At i.v Site**



Fig. 2: Showing Maculopapular Rashes on arm.

The reaction was first at the site of i.v insertion on the dorsum right hand and later it progressed all over the body. The patient had no history of dermatological disorders or allergic reactions to any drugs or to any concomitant drug. The dermatologist told her to stop thrombophob ointment it was diagnosed as drug induced urticaria. The allergic reaction was treated with tab. Allegra (fexofenadine) 10mg once daily for 5 days, Tab. Enzaflam (diclofenac + paracetamol + serratiopeptidase) twice daily for 3 days, Tab. Panto DC (pantoprazole) 40mg once daily for 10 days and topical calamine.

Routine investigations were done. They were all within normal limits. Colour duplex Doppler for venous evaluation of right upper limb was performed. Impression was superficial thrombophlebitis on dorsum of wrist and medial aspect of forearm extending to basilic vein in arm. No evidence of deep venous thrombus.

Thrombophob ointment was stopped, the treatment showed improvement and rashes gradually disappeared in 4 days without any adverse sequelae.

DISCUSSION

Heparin is an anticoagulant, acts by binding reversibly to antithrombin III and accelerates its action to inactivate coagulation enzymes thrombin and factor Xa and thus promotes fibrinolysis. Incidence due to i.v catheters causing endothelial trauma and inflammation and leading to venous thrombosis is about 75%. Topical application of heparin is standard medical therapy.

A case of such reaction was reported in blood donor when thrombophob was applied postphlebotomy. The donor had developed well-defined erythematous, edematous wheals at the site of thrombophob ointment application.^[7] We report a similar case of thrombophob induced redness, rash and urticaria. The drug should be contraindicated in patients with history of hypersensitivity to heparin and benzyl nicotinate.

In our case, a systematic approach was done to determine whether the suspected adverse drug reaction was actually due to drug or a result of other factors. To determine the

casual relationship between urticaria and thrombophob, Naranjo's causality scale was used. The following criteria were taken into account: The adverse event appeared after the suspected topical application of thrombophob in a day and within 4 days of discontinuation of the drug it slowly resolved. Rechallenge was not done as patient complained of chest pain and due to ethical issues. There were no alternative causes that could have caused the reaction. The rashes and urticaria subsided when calamine was applied and with the treatment. Hence, it was considered that urticaria and rash was probably caused by thrombophob and Naranjo scale score is +6. The WHO-Uppsala monitoring centre causality assessment criteria also indicated a probable relation.

This case highlights the adverse reaction to thrombophob. Since it is commonly used as topical application it should be used cautiously or prior patch test can be done to prevent such adverse reactions.

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