

TRANSIENT POST-INFUSIONAL PHLEBITIS. ABOUT FOUR CASES

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Summary

Introduction: Peripheral vein administration of certain drugs can produce a locally transient post-infusional phlebitis (TPP) with complete recovery after the ending of the infusion. In dermatology, the most common drug that can produce this reaction is Alprostadilum, used in patients suffering from chronic arterial occlusive disease.

Material and methods: Four cases of transient post-infusional phlebitis are presented.

Key words: peripheral vein administration, transient post-infusional phlebitis, alprostadilum, pethidine hydro-chloride, paclitaxel.

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Introduction

Peripheral vein administration of certain drugs can produce a locally transient post-infusion phlebitis (TPP) with complete recovery after the ending of infusion. In dermatology, the most common drug that can produce this reaction is Alprostadilum, used in patients suffering from chronic arterial occlusive disease.

Materials and method. Patients

Case 1. A 79-year-old female patient known with chronic arterial occlusive disease was started with intravenous (IV) alprostadilum. She developed phlebitis after 2 minutes from the start of the infusion, associated with swelling and a mild pain sensation (Fig. 1). The signs and symptoms disappeared within 35 minutes after the end of the infusion. The patient also developed transient phlebitis at every subsequent infusion of alprostadilum.

Case 2. A 76-year-old male patient with a history of chronic arterial occlusive disease was started with IV alprostadilum and developed

phlebitis after 6 minutes from the infusion accompanied by swelling and pruritus sensation (Fig. 2). The signs and symptoms disappeared within 15 minutes after the end of the infusion. The patient developed transient phlebitis at every subsequent infusion of alprostadilum.

Case 3. A 42-year-old male patient received peripheral IV infusion with pethidine hydro-chloride for analgesic purpose after a car accident (Fig.3). After 5 minutes he developed local phlebitis accompanied by moderate pain. After the end of the infusion the signs gradually disappeared, with total recovery within 20 minutes.

Case 4. A 71-year-old female patient suffering from breast cancer started the treatment with paclitaxel. After the end of the infusion, she developed local phlebitis with pain. The signs and symptoms persist for two days.

Discussion

TPP is produced by the irritant action of certain substances that are able to produce

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Figure 1. Transient post-infusion phlebitis after 2 minutes from the start of the infusion of alprostadilum



Figure 2. Transient post-infusion phlebitis after 6 minutes from the start of the infusion of alprostadilum



Figura 3. Flebită tranzitorie postperfuzională la 5 minute de la începerea perfuziei cu clorhidrat de petidină



Figure 4. Transient post-infusion phlebitis after ending the infusion of paclitaxel.

inflammation of the endothelium. The risk that a chemical drug has to produce TPP increases directly with the deviation from the normal Ph value, more acid or more alkaline. Furthermore, the osmolarity of the substance plays an important role in producing a lesion of the endothelium especially when is greater than 600 mOsm [1]. Another risk lies in the administration on small caliber veins [2].

In the case of systemic administration of pethidine hydrochloride, there is also a secretion of histamine [3]. Prakash Krishnan et al report a case of an atopic patient that received pethidine hydrochloride as a post-surgery analgesic with the development of TPP, with remission within 20 minutes after the end of the infusion.

Considering the patient history, the reaction was supposed to be provoked by the massive release of histamine [4]. A similar case is described by Premila Hirubala et al in an atopic woman which developed TPP after pethidine hydrochloride and the local reaction completely disappeared after 150 minutes from the end of infusion [5]. I did not noted atopic dermatitis signs or a history thereof in these 3 patients.

Hendricks et al related a series of six female patients from a group of ten that developed TPP after the infusion of alprostadilum for therapeutic abortion and the intensity of clinical signs increased along with the concentration of the substance [6]. Eptifibatide was cited to produce TPP in one case with rapid recovery after the end

of infusion [7]. TPP was also cited in different cases of chemotherapies like doxorubicin, epirubicin or daunorubicin with the remission in about one to two hours after the end of infusion [8,9].

Conclusion

TPP is a transient vascular reaction caused by the infusion of various drugs. In most of the cases

is spontaneous reversible after the end of infusion. Knowing this adverse reactions can be useful to calm the patient, to avoid improper treatments and why not to manage properly cases that can be associated with cases of malpractice.

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Conflict of interest
NONE DECLARED

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