Short communication

Preauricular injection of betamethasone depot and acyclovir for the treatment of acute herpes zoster ophthalmicus

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ABSTRACT

Clinical cases: Several treatments have been described for the management of patients with herpes zoster ophthalmicus (HZO). However, the progress of these patients is usually slow, and many of them develop postherpetic neuritis (PHN). In the present paper, three clinical cases are presented, in which a significant symptomatic improvement was obtained by using a preauricular injection of a mixture of betamethasone depot combined with acyclovir. PHN did not develop in any of them.

Discussion: The preauricular injection of betamethasone depot and acyclovir could be a good alternative for the management of HZO.

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Inyección preauricular de betametasona de depósito y aciclovir para el tratamiento del herpes zóster oftálmico agudo

RESUMEN

Casos clínicos: Para el manejo del herpes zóster oftálmico (HZO), se han descrito diferentes tratamientos. Sin embargo, la evolución de estos pacientes es usualmente prolongada y muchos de ellos desarrollan neuritis postherpética (NPH). En el presente trabajo, se presentan 3 casos clínicos, en los cuales, mediante una inyección preauricular de una mezcla de betametasona de depósito combinada con aciclovir se obtuvo una importante mejoría clínica y sintomática. Adicionalmente, no se reportó el desarrollo de NPH.

Discusión: La inyección preauricular de betametasona de depósito y aciclovir podría constituir una buena alternativa para el manejo del HZO.

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Introduction

Several treatments have been described\(^1\) for clinically improving Herpes zoster ophthalmicus (HZO) in its acute phase. However and in accordance with the literature, the evolution of these patients is prolonged, with 10–20% of patients over 50 with HZO exhibiting post-herpetic neuritis (PHN). This article presents 3 clinic cases managed with a preauricular injection of a mixture of deposit betamethasone combined with acyclovir.\(^2,3\)

Description of the technique

With prior asepsis and antisepsis of the preauricular region on the affected side with isodine solution, ice is placed during 4 min in order to produce a degree of local analgesia. Two syringes are prepared, one with a milliliter of lidocaine without epinephrine (Roxicain® 2%), and the other with a mixture of 1 mL of deposit betamethasone (5 mg dipropionate and 2 mg of disodium phosphate, Diprosan®) and 1 mL of acyclovir (25 mg, Virex®). By means of palpation, a point is located in the external part of the mandibular region immediately below the condyle of the temporomandibular articulation (Fig. 1), and with a 26G 1/2 needle lidocaine is injected slowly and deeply so as to reach the bone. Subsequently, with mosquito tweezers the syringe is carefully removed without removing the needle and avoiding changes in this position. Three minutes later the above mixture is injected exerting continuous pressure for about 3 additional minutes.

Clinic cases

Case report 1

Male, 55, admitted through the Emergency Department due to intense pain in left hemicranium with 4 days evolution. He was diagnosed with left HZO without ocular involvement, establishing treatment with oral acyclovir 800 mg every 4 h, 5 times a day, ibuprofene 400 mg every 8 h and prednisone 50 mg per day. The second day, after poor improvement, the patient was referred to our practice where he was treated with the above described preauricular injection, continuing with acyclovir 800 mg every 4 h, 5 times a day, completing 7 days of treatment, suspending all other medication. The patient was assessed again after 48 h, evidencing significant improvements in pain and edema (Figs. 2 and 3). After 2 weeks there was no pain and skin lesions disappeared completely. After one month, the patient did not exhibit any symptoms.

Case report 2

Female, 77, who visited on February 25, 2011 with irritation and pain in the right eye (RE) and right side of face with 3 days evolution. She was given treatment with tobramycin and dexamethasone (Trazidex®), without acyclovir, with no improvements being shown. Physical examination evidenced HZO affecting the RE with small corneal ulcer. Therapeutic contact lens was fitted, tobramycin and dexamethasone treatment was suspended, and the above described preauricular injection was applied without any other type of medication. After 48 h, the patient exhibited complete absence of pain. After 10 days, 80% of the lesions had improved. After 3 weeks, there was no pain or lesions on the skin and the corneal ulcer exhibited 90% resolution. After month 1 and month 6, the patient exhibited no type of sequel or PHN symptomatology.

Case report 3

Female, 69, referred by dermatologist due to HZO which did not improve with topical acyclovir every 5 h and 1 g of oral vancyclovir every 8 h. Physical examination evidenced right side HZO without ocular involvement. The above mentioned preauricular injection was indicated, suspending the previously formulated medication. The patient was controlled after 24 h, referring significant improvements in pain. At month 1, the disease remitted completely. At month 6, no sequels could
be observed in the skin or the eye, and PHN symptomatology was also absent.

**Discussion**

For management of acute HZO, antivirals have been described including acyclovir, valacyclovir, famcyclovir\(^4\) and other drugs such as como brivudine, foscarnet, topical and systemic corticosteroids\(^7\) among others. However, despite treatment, HZO patients exhibit very slow recovery and high possibilities of developing PHN\(^8,9\).

This paper presents 3 clinic cases which, after the application of a preauricular injection of deposit betamethasone and acyclovir, a significant and rapid improvement of painful symptoms was evidenced together with rapid reduction of HZO skin lesions. Said improvement was faster and more efficient than evidenced with conventional treatment. In addition, none of the described cases developed PHN. These results could be explained by the glucose-dependent axonal transport mechanism and the function of the axoplasm which, by means of transport filaments, create crossed bridges with microtubules and produce anterograde and retrograde flows carrying metabolites, proteins and enzymes, among others. This flow can reach a speed of 20–70 mm per day\(^10\) and, for this case, would act through the sensitive nerve fibers of the auricular-temporal nerve and, for the anterograde pathway, toward the ophthalmic branch (the affected area), thus allowing pharmacological action and faster clinic improvement.

The satisfactory improvement found with the preauricular injection described above could constitute a valid alternative for management of HZO. However, as this therapeutic option is invasive it involves a risk of local and systemic infection as well as facial nerve injury. Even so, the improvements described herein should be confirmed by means of subsequent studies.

**Conflict of interests**

No conflict of interests was declared by the authors.

**References**