Topical cyclosporine as an alternative treatment for herpetic interstitial keratitis

Ciclosporina tópica como alternativa eficaz en el tratamiento de las queratitis intersticiales herpéticas

Dear Sir,

Infection due to herpes simplex virus (HSV), also known as human herpes virus (HHV), continues to be the most frequent cause of corneal blindness in developed countries, where the prevalence rate is between 20.7 and 31.5 episodes for each 100,000 inhabitants per year.\(^1\)

Stromal disease caused by HSV can present in necrosing or non-necrosing form. It is believed that non-necrosing stromal keratitis, the subject of this letter, constitutes an immune process which presents as interstitial or disc-shaped keratitis. Chronic or recurring inflammation can lead to loss of vision due to neovascularization, deposit of lipids, fibrosis and corneal thinning. In interstitial keratitis the inflammatory
reaction involves antigens-antibody. It has been determined that CD4+ lymphocytes play a very important role in said reaction. On the other hand, interleukin-2 (IL-2) and gamma interpheron (IFN-γ) also increase in the acute stage of the disease. All these mediators activate a number of effector cells that destroy the stroma.\textsuperscript{2,3} The customary treatment was topical corticoids but the long-term treatment requirements could end up producing sever ocular complications.

Cyclosporine A is an immunosuppressant produced by a fungus \textit{(Tolypocladium inflatum)} which selectively interferes with the inflammatory cells without producing widespread cytotoxic effects. By inhibiting cyclophylin, cyclosporine A prevents transcription and production of IL-2 by CD4+ cells.

Recently, topical cyclosporine A has been used in the treatment of various ocular surface inflammatory pathologies such as the dry eye syndrome, vernal and atopical keratoconjunctivitis with good results.\textsuperscript{4} For this reason we initiated treatment with this topical immunosuppressant in our hospital in a 5-case series with interstitial keratitis of herpetic origin.\textsuperscript{5,6}

We present a series of five patients diagnosed with interstitial keratitis of herpetic origin, followed up in our service. All the patients had been treated with topical corticoids, they were dependent on this treatment and exhibited ocular hypertension secondary to prolonged corticosteroid treatment. It was decided to establish treatment with 1% topical cyclosporine at eight-hour intervals after they signed a specific informed consent. The topical corticoids doses were gradually diminished and withdrawn in a two-week period. Subsequently, all the patients were taken off the ocular hypertension treatment. This improvement began to be observed two weeks after establishing the topical cyclosporine treatment (fig. 1).

After following up the patients for two months, no adverse effects have been observed at the local or systemic level, while their quality of life has increased considerably.

For the above reasons, we propose 1% topical cyclosporine as a treatment alternative in repeated herpetic interstitial keratitis patients who generally develop corticosteroids dependency. However, additional studies are required with a higher number of patients to confirm the efficacy and innocuity of this treatment.

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REFERENCES


