

# Response to: topical cyclosporine A 0.05% before and after surgery to prevent pterygium recurrence

Resposta para: Ciclosporina A 0,05% antes e após a cirurgia do pterígio para a prevenção da recorrência

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Dear Dr. Alacamli,

Thank you for your interest in our study involving pterygium and the use of cyclosporine A (CsA) as an adjuvant drug to prevent pterygium recurrence after lesion removal.

According to a recent review, the main risk factor of pterygium progression remains ultraviolet exposure<sup>(1)</sup>, and one of the most challenging aspects involving this lesion is still the prevention of recurrence. In a previous *in vitro* study, we found that 0.05% CsA is effective in inhibiting fibroblast proliferation, both in primary and in recurrent pterygium<sup>(2)</sup>. Also, *in vitro*, a combination of CsA with bevacizumab can reduce fibroblast outgrowth from cultured pterygium tissue explants, playing an important role in fibroblast migration and preventing T-helper cell activation and inflammatory cytokine production<sup>(3)</sup>.

However, when using CsA for 10 pre- and 10 postoperative days, as stated in our article, we observed that CsA did not prevent or reduce the recurrence of pterygium, probably because of the short period of use<sup>(4)</sup>. As you also reinforced, the results can be influenced by the

short period that the drug was used for, which should be not enough.

In addition to the short period of use, there are other *biases* that can directly affect the outcome of the pterygium studies, as the inclusion of a few patients, application mode (topically or by subconjunctival injection), and variations in surgical techniques. Because of this, a meta-analysis was conducted, suggesting that adjuvant use of CsA can significantly reduce the risk of pterygium recurrence compared with pterygium excision alone, whereas CsA may not reduce the risk of pterygium recurrence if pterygium excision is associated with limbal conjunctival autograft or conjunctival flap rotation<sup>(5)</sup>.

Our study concluded that "Topical 0.05% CsA, when used for 10 days before and 10 days after the pterygium removal, does not prevent or reduce the recurrence of primary pterygium", and we suggested that "further studies are necessary to evaluate the efficacy of CsA to prevent pterygium recurrence when used for different time periods and assess which number of days of pre-operative CsA use provides benefit if any".

According to others, postoperative topical 0.05% CsA (4 times a day for 6 months) can prevent recurrence of pterygium<sup>(6)</sup>.

In conclusion, further studies are still needed to prove the best way to prevent pterygium recurrence and the role of CsA in it.

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