

## Topical Cyclosporine A-Induced Trichomegaly of the Eyelashes

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Dear Editor,

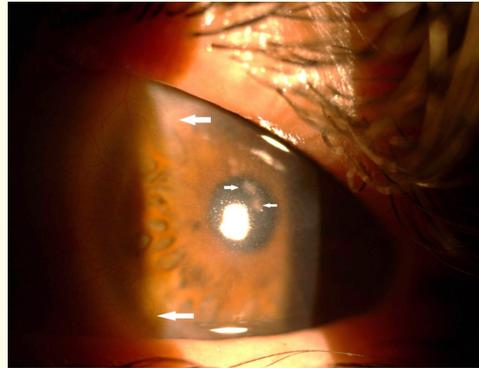
Trichomegaly is an uncommon side effect of topical cyclosporine A (CsA) treatment, widely used in ocular surface diseases. Herein, we describe a patient who developed trichomegaly of the eyelashes due to the use of topical CsA.

A thirty-one-year-old male patient was admitted to our outpatient clinic complaining of eye redness, foreign body sensation, and eyelash elongation. He also complained of ocular itching and burning. Due to keratoconjunctivitis sicca, he used artificial tears and gels for five years. It was also ascertained that he regularly used topical cyclosporine-A 0.05% (Restasis, Allergan, Inc, Irvine, California) four times a day for two years. His eyelashes became more curly and elongated after using this medication. It was also ascertained that the patient regularly required trimming of his eyelashes. He had hypertrichosis and elongation in the bilateral upper lid lashes (Figure 1). The ocular examination revealed conjunctival hyperemia, corneal punctate staining, and vascularization at the peripheral cornea. He had also filamentary keratitis (Figure 2). The Schirmer test was less than 5 mm bilaterally. Topical CsA therapy was stopped, and artificial tears and fluorometholone/tetrahydrozoline drops were administered. The patient used no systemic drugs, such as epidermal growth factor receptor (EGFR) inhibitors, prostaglandins, tacrolimus, minoxidil, or interferon (IF)-alpha. The patient was informed about the report, and signed consent form was collected.



**Figure 1:** External photograph showing hypertrichosis and elongation in the bilateral upper lid lashes.

Trichomegaly is elongation of the eyelashes. It is usually accompanied by increased pigmentation and thickness of the eyelashes. Trichomegaly of the eyelashes may be congenital, familial, or a complication of drug usage [1]. Systemic therapy with cyclosporine A (CsA) has been linked to the occurrence of general hypertrichosis and eyelash trichomegaly [2]. However, there is only one case presentation regarding the side effects of the topical administering of CsA-associated eyelash trichomegaly [3].



**Figure 2:** Slit lamp photograph of the left eye demonstrating corneal vascularization (big arrows) and filaments (small arrows).

Cyclosporine A is a T cell-specific immunosuppressant, which inhibits the production of interleukin (IL) -2 by interfering with the IL-2 gene expression. One of the most common side effects of systemic CsA is dose-dependent hypertrichosis [4]. CsA acts by inducing anagen and inhibiting the catagen phase [5]. Due to these effects, it has been used in the treatment of alopecia areata [6]. As generalized hypertrichosis, CsA may induce eyelash trichomegaly [2]. Jayamanne., *et al.* [7] reported on trichomegaly and distichiasis in a renal transplanted patient receiving CsA. Moreover, topical usage of CsA has been shown to be effective in the treatment of dry eye and atopic keratoconjunctivitis. The adverse reactions of topical CsA are ocular burning, conjunctival hyperemia, secretion, epiphora, eye pain, foreign body sense, pruritus, stinging, and visual disturbance. Although these side effects are common, trichomegaly is a very rare complication of CsA ophthalmic emulsion. There is only one case report describing topical CsA-induced eyelash trichomegaly. Unlike our case, the diagnosis of the patient was giant papillary conjunctivitis. Our patient had moderate dry eye and used artificial tears and topical CsA. He observed that his eyelashes became longer and curly after using CsA.

Like CsA, some medications, such as EGFR inhibitors, minoxidil, and the topical administering of prostaglandins have also been reported to lead to trichomegaly [1]. This side effect is rarely associated with the use of tacrolimus, IF-alpha, topiramate and zidovudine. Although rare, topical cyclosporin-A may induce eyelash trichomegaly. Trichomegaly is not a drug-limiting side effect. Because of abnormal growth, long and curly eyelashes may cause ocular irritation, corneal abrasions and blurred vision [1]. Patients with trichomegaly should be questioned about the possible use of topical CsA. Moreover, more information concerning this side effect should be given to patients on long-term CsA.

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