



Ghost of Dendrite

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Authors' contributions

This work was carried out in collaboration among all authors. Author ZR contributed to the photography and writing of the article. Author LN contributed to the writing of the article. Author KM contributed to the bibliographic research. Authors RK and OA approved the study. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

We report the case of a 12-year-old child with non-necrotic herpetic stromal keratitis presents as a «ghost of dendrite» the form of initial dendritic epithelial keratitis. We give special attention to the need for the introduction of corticosteroids in combination with antivirals to control inflammation related to viral replication.

Keywords: *Stromal keratitis; herpes; dendrite; corticosteroids; antivirals.*

1. CASE REPORT

The stromal form of keratitis is an atypical form of corneal infections caused by the herpes simplex virus.

2. OBSERVATION

A 12-year-old patient with a history of a painful right red eye episode with decreased visual acuity 4 months earlier, the patient was given

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ganciclovir gel five drops per day for two weeks. Faced with the persistence of residual photophobia and eye pain with a tingling type of the same eye, the patient was referred to our department for further treatment. The history revealed the notion of a recurring fever blister since the age of 4. The visual acuity with correction was to 9/10 and 10/10 respectively for the right and left eye. Examination with a slit lamp of the right objective eye revealed a slight palpebral edema, a discrete diffuse conjunctival hyperhaemia and a loss of corneal transparency in the coarse form of a fuzzy boundary dendrite infiltrated by the edema, creating the appearance of a "dendrite ghost" (Fig. 1). Examination of corneal sensitivity shows slight hypoesthesia in the center of the cornea. Fluorescein instillation does not reveal any loss of substance or abnormalities in tear film quality. The examination of the left eye was without any notable clinical features.

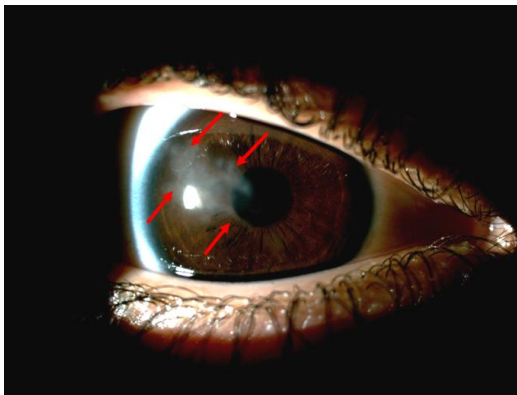


Fig. 1. Appearance of "dendrite ghost"

In view of the history of fever blister, the improvement described under antivirals, corneal hypoesthesia, unilaterality and arborized appearance of the lesion, the diagnosis of non-necrotic stromal herpes keratitis was made and the patient was given oral valaciclovir for 72 hours and then in combination with topical dexamethasone in high doses at first and then decreasing. The evolution was marked by the disappearance of photophobia and eye pain as well as an improvement in visual acuity of 10/10 after one week. Biomicroscopic examination at the end of the treatment showed a significant decrease in corneal opacity size with resorption of peri-lesional edema (Fig. 2).

3. DISCUSSION

Typical dendritic keratitis is the arborescence of several vesicles rich in viral particles, surrounded

by an inflammatory reaction made of immune cells in adjacent corneal blades [1,2]. The healing of the epithelial lesion and the persistence of stromal infiltration in the absence of adequate anti-inflammatory treatment are at the origin of the "dendrite ghost" observed in this young patient; A lesion rarely reported in the literature.

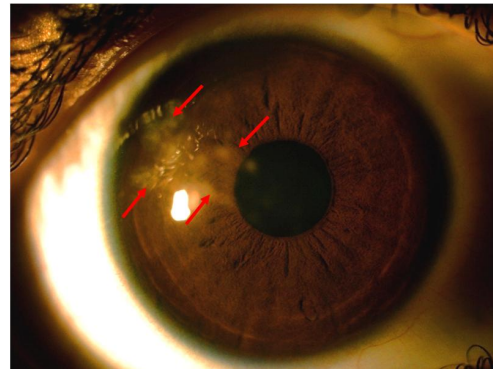


Fig. 2. Remarkable clinical improvement under antiviral and corticosteroid treatment

Thus, pure non necrotic stromal keratitis reflects an immune conflict in response to virus replication in the stroma by involving both antigen-antibody-completion reactions and lymphocyte infiltration specific to infected cells causing possibly persistent tissue abnormalities [3,4]. Functional signs are moderate, with no decrease in visual acuity except in cases of central involvement [5,6]. Treatment is essentially based on the use of corticosteroids under antiviral coverage [7,8].

4. CONCLUSION

While epithelial dendritic keratitis is the typical presentation of corneal herpes simplex virus infections, it is important to note that the latter is rare in the more atypical, low noise, non-necrotic stromal form evolving towards aggravation; namely neovascularization and corneal opacification. Treatment is based on the judicious combination of antivirals and corticosteroids.

CONSENT AND ETHICAL APPROVAL

As per university standard guideline, participant consent and ethical approval have been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Robert PY. Clinical and diagnostic news of corneal herpes. J Fr. Ophthalmol. 2004; 27(5):524-527.
2. Liesegang TJ. Herpes simplex virus. Epidemiology and ocular importance cornea. 2001;20:1-13.
3. Liesegang TJ, Melton LJ, Daly PJ, Ilstrup DM. Epidemiology of ocular herpes simplex. Incidence in Rochester, Minn, 1950 through 1982 Arch Ophthalmol. 1989;107:1155-1159.
4. Liesegang TJ. Classification of herpes simplex virus keratitis and anterior uveitis. Cornea. 1999;18(2):127-143.
5. Labetoulle M, Rousseau A, Bourcier T. Herpes lesions of the anterior segment of the eye: Epidemiological, clinical and diagnostic aspects. Encycl Med Chir. (Elsevier Masson, Paris), Ophthalmology, 21-200-D-20. 2014;10.
6. Kaye S, Choudhary A. Herpes simplex keratitis. Prog Retin Eye Res. Epub. 2006;25(4):355-80.
7. Colin J. Pathologies of the cornea and conjunctiva. Herpes attacks. Ophthalmic zone Eye and virus Paris: Masson. 2000; 219-240.
8. Antivirals in herpetic keratitis: Which doses? How to manage? Labetoulle, 1, 2, t. bourcier 3. Ophthalmic realities # 201_march 2013_cahier 1.

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