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RESEARCH ARTICLE

AN UNSUAL VIRAL ENDOTHELIITIS

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Abstract

HSV infection can affect nearly every ocular tissue. In cases of corneal involvement, the epithelium, stroma, or endothelium may be affected. Both herpes stromal keratitis (HSK) and HSV endotheliitis can present clinically with stromal opacity and, therefore, may be difficult to distinguish. In this case we will be describing a viral endotheliitis with a particular aspect on the corneal endothelium.

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Introduction:-

HSV infection can affect nearly every ocular tissue. In cases of corneal involvement, the epithelium, stroma, or endothelium may be affected. Both herpes stromal keratitis (HSK) and HSV endotheliitis can present clinically with stromal opacity and, therefore, may be difficult to distinguish.

In this case we will be describing a viral endotheliitis with a particular aspect on the corneal endothelium.

Case Description:

A 19 years old girl was referred to us from the ER for a reduced visual acuity on her left eye during 1 month. She had consulted to various ophthalmologists who treated her as a viral conjunctivitis with some lubricants and physiological serum with no improvement. She's had been suffering from a tearing left red eye. Her VA was 6-7/10(OS). On the slit lamp examination, we found a conjunctival hyperemia and a perikeratic circle. Fluorescein examination showed an altered break up time and no dendrites. While examining her cornea, we saw a pseudo-line of Khoudadoust in the endothelium more important in the inferior part with some small new vessels invading the peripheral endothelium. There were some few cells in the AC and no synechiae. Fundus and the right eye examinations were normal.

We decided to do an ACP and started in parallel an antiviral treatment (Oral Valacyclovir 3grams/day). 2 days later we added a local steroidal anti-inflammatory treatment. 5 days later, ACP showed an HSV positive PCR. There was a good response to her treatment (No more clinical signs and no AC cells) and a progressive regression of the particular aspect on the cornea until it disappeared 1 month later leaving a small whitish endothelial temporal opacity.

The patient is still taking a prophylactic dose of antivirals. Until now, there is no recurrence.

Discussion:-

Endotheliitis is an inflammation of the corneal endothelium that disrupts the function of endothelial cells and leads to edema and visual changes. It has got multiple etiologies.¹

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Patients usually report photophobia, eye pain and visual disturbances. While examining, we look for a limbal injection, a corneal edema and KPs. AC inflammation is moderate. In chronic cases we will find neovascularization.^{[2] [3]}

Keratic precipitates' aspects define four sub-groups: Linear (Linear KP), Sectoral (Disseminated arrangement of KP), disciform (Disc-Shaped edematous lesions in the center of the cornea) and diffuse.⁴

CMV endotheliitis is characterized by linear or circularly organized(coin-shaped) KP with a local stromal edema.⁴ It is rarely diffuse.⁵ IOP can be elevated⁶ and progression to chronicity is not rare⁴. The patient is usually immunocompetent. Diagnosis is confirmed by a PCR analysis of AC aqueous. Treatment is with oral ganciclovir with topical corticosteroid.¹KP in HSV endotheliitis can take any of the four described shapes above. Iritis and IOP elevation secondary to trabeculitis can be associated.⁷Patient is often immunocompromised. PCR analysis of AC aqueous detects viral genome. It is treated by oral acyclovir and corticosteroid. Other rare viral causes are Myxovirus Parotitis (Mumps) Virus(Associated with a Lacrimal gland inflammation), HHV, VZV and EBV. ¹ Bacterial and fungal etiologies are often associated to a keratitis and important inflammation.⁸

Drugs can also induce an endotheliitis (Amantadine, Amiodarone, Mytomicin C, Benzalkonium chloride (In patients with pre-existing endothelial problems), Alcohol and cannabinoids). Procedural causes include Corneal cross-linking, PC IOL, Allograft rejection, Dexamethasone implants...¹. Other causes include contact lenses, exercise, systemic diseases (GCA and sarcoidosis), retinoblastoma and idiopathic endotheliitis. ¹

Conclusion:-

The endothelial corneal aspect we have described in this case report is really interesting and rare. It should always be kept in mind while assessing an endotheliitis.

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