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Neglected Staphylococcal Marginal Keratitis Secondary To Severe Blepharitis: A Sterile Condition On Infected Eyes.

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Abstract:
Corneal catarrhal infiltrates corresponds to a sterile staphylococcal marginal infiltrates due to a specific hypersensitivity reactions of type III and IV. We report a case of a patient who has corneal catarrhal infiltrates due to a severe blepharitis. This case illustrates an overlap between infectious and non infectious conditions in the same eye.
Key Words: *catarrhal infiltrates; Corneal infiltrates; Blepharitis; Eyelid.*

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I. Introduction:

Staphylococcal marginal keratitis is an inflammatory disease of the peripheral cornea. It is a relatively common, non-infectious immune system disorder. It is usually associated with blepharoconjunctivitis and is likely to be an inflammatory response against the S. aureus antigen [1]. We report a case of a patient who has corneal catarrhal infiltrates due to a severe blepharitis. This case illustrates an overlap between infectious and noninfectious conditions in the same eye.

II. Patient And Case Report:

A 70-year-old male patient presents with a 2-year history of bilateral red eye, epiphora, ocular discomfort and gradual visual loss. The patient denied any ocular or systemic conditions. Visual acuity was counting fingers OU. Examination demonstrated bilateral severe blepharitis, arcus senelis, pseudoexfoliatif syndrome and dure cataract. The right eye showed three round, discret, greyish white peripheral corneal infiltrates (2 mm to the limbus), with circumlimbal sparing (Figure 1). The lesions are located where the eyelid margin intersects the limbus. The posterior segment was inaccessible and showed normal appearance on ocular ultrasonography. Based on the symptoms and the biomicroscopic aspect, the patient was diagnosed with catarrhal infiltrate. It corresponds to a sterile staphylococcal marginal infiltrate. The patient has a corneal pannus, anterior and posterior blepharitis. Staphylococci can cause locoregional inflammation.

III. Discussion:

Corneal catarrhal infiltrates corresponds to a sterile staphylococcal marginal infiltrates due to a specific hypersensitivity reactions of type III and IV[2]. The release of toxins and antigens from the bacterial wall at the ocular surface generates specific hypersensitivity reactions of type III and IV that explain the occurrence of catarrhal infiltrates, phlyctenular keratoconjunctivitis and probably conjunctival inflammation and scleritis [3].

Sterile marginal corneal infiltrates appear as small, gray-white circumlimbal lesions approximately 1 mm in diameter. these lesions are separated from the limbus by about 1 mm of healthy cornea, they may be accompanied by epithelial ulceration. the attack can be unilateral or bilateral. These lesions may be asymptomatic, but the patient may present with signs related to blepharoconjunctivitis. If the infiltrates approach the center, patients may complain of photophobia [4-5].

The pathogenesis of sterile marginal infiltrates appears to involve an acute immune response to corneal damage. The introduction of antigen to the ocular surface is responsible for the release of inflammatory mediators and vasodilation. Clusters of white blood cells form these infiltrates. proteases released by white blood cells lead to epithelial ulceration. One can observe an associated vascular pannus [4-5].

Cultures from this group of patients are commonly negative. infiltration is most likely the result of an immune response to bacterial toxins or the presence of bacteria in the form of biofilms, which are undetectable by conventional cultivation methods. Studies have shown that lipopolysaccharide (LPS) (a component of Gram-

negative bacterial cell wall), participates in the release of pro-inflammatory cytokines such as IL-1a which has a potent neutrophil chemotactic which helps in the degranulation of these cells [6]. Sterile peripheral marginal infiltrates are indeed a self-limiting lesion, they can disappear without treatment. however, symptomatic patients benefit from topical corticosteroid therapy in terms of accelerated improvement in quality of life. [6].

IV. Conclusion:

Staphylococcal marginal keratitis is an immune reaction mainly secondary to chronic blepharoconjunctivitis, which usually activates an antigen-antibody reaction with complementary activation and infiltration of neutrophils in patients sensitized to staphylococcal antigens. Topical steroids are effective. Prevention of these corneal infiltrates requires the diagnosis and early treatment of blepharoconjunctivitis.

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FIGURES and Tables:

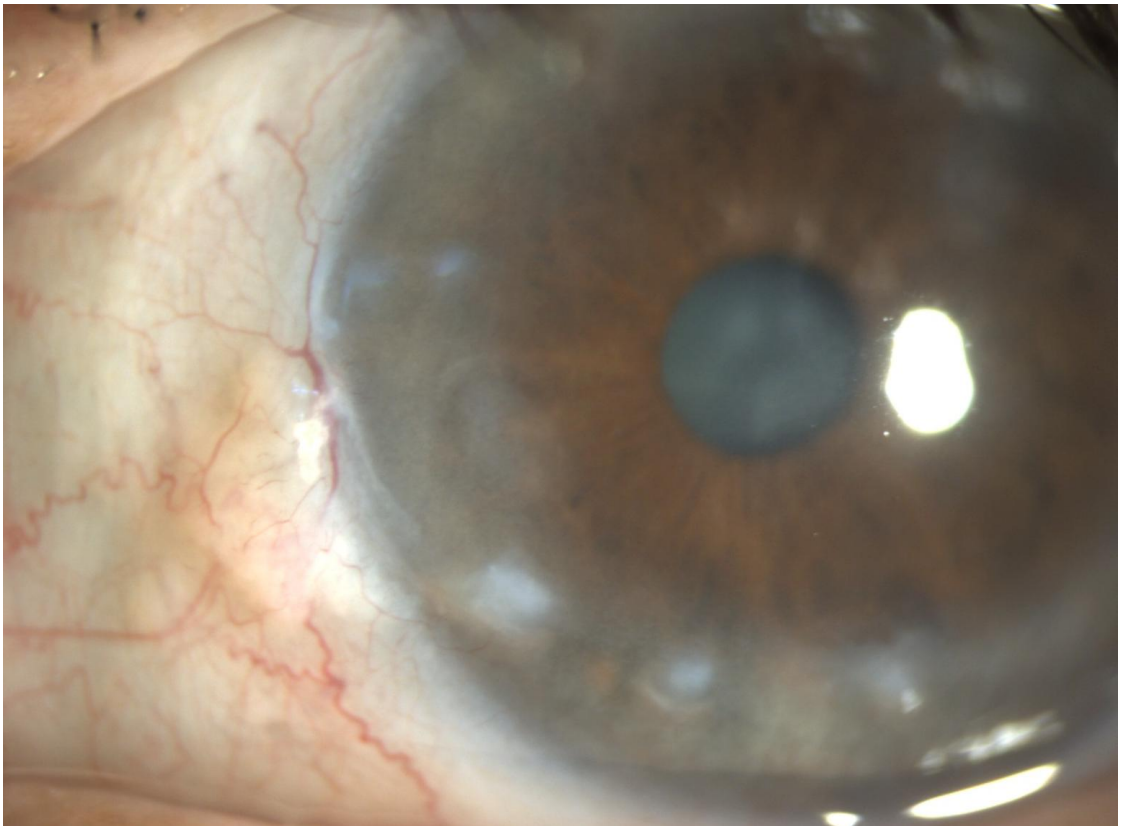

Figure 1: Marginal catarrhal corneal infiltrates: Three greywish white infiltration separated by a healthy corneal zone and corneal pannus.

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