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ETIOLOGY OF BLEPHARITIS

Annotation: Blepharitis, an inflammatory condition of the eyelid margin, is a common cause of ocular discomfort and irritation in all age and ethnic groups. While generally not sight-threatening, it can lead to permanent alterations in the eyelid margin or vision loss from superficial keratopathy, corneal neovascularization, and ulceration.

Key words: blepharitis, inflammation, blood vassels.

Blepharitis can be divided into anterior and posterior according to anatomic location, although there is considerable overlap and both are often present. Anterior blepharitis affects the eyelid skin, base of the eyelashes, and the eyelash follicles and includes the traditional classifications of staphylococcal and seborrheic blepharitis. Posterior blepharitis affects the meibomian glands and gland orifices and has a range of potential etiologies, the primary cause being meibomian gland dysfunction (MGD).

While the etiology of blepharitis is complex and not fully understood, bacteria and inflammation are believed to contribute to the pathology. Long-term management of symptoms may include daily eyelid cleansing routines and the use of therapeutic agents that reduce infection and inflammation.

Blepharitis is one of the most common ocular disorders encountered in clinical practice. In a survey of US ophthalmologists and optometrists, 37% to 47% of patients seen by those surveyed had signs of blepharitis. Apart from some regional studies, however, few epidemiologic data exists that estimate its true prevalence in the general population. A recent cross-sectional study in Spain based on a randomly selected sample population reported rates of asymptomatic and symptomatic meibomian gland dysfunction of 21.9% and 8.6% of individuals, respectively.

Blepharitis can affect all age and ethnic groups. One single-center study of 90 patients with chronic blepharitis found that the mean age of patients was 50 years. Compared with patients with other forms of blepharitis, patients with staphylococcal blepharitis were found to be relatively younger (42 years old) and mostly female (80%).

Dry Eye

Dry eye has been reported to be present in 50% of patients with staphylococcal blepharitis.Conversely, in a series of 66 patients with dry eye, 75% were reported to have staphylococcal conjunctivitis or blepharitis. It has been postulated that a decrease in local lysozyme and immunoglobulin levels associated with tear deficiency may alter resistance to bacteria, predisposing patients to the development of staphylococcal blepharitis.

Approximately 25% to 40% of patients with seborrheic blepharitis and MGD also have dry eye. This may result from increased tear film evaporation due to a deficiency in the lipid component of the tears as well as reduced ocular surface sensation.

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Acne rosacea has been reported in 20% to 42% of patients with all types of blepharitis. Characteristic facial skin findings include erythema, telangiectasias, papules, pustules, and prominent sebaceous glands. Severe cases of both acne rosacea and blepharitis can lead to a severe periorbital erythematous edema known as Morbihan Syndrome. This edema is granulomatous in nature, thought to be due to chronic inflammation of the cutaneous vessels.The edema itself can be vision-obscuring.

Seborrheic dermatitis, characterized by flaking and greasy skin on the scalp, retroauricular area, glabella, and nasolabial folds, has been reported in 33% to 46% of patients with blepharitis.In one study, 95% of patients with seborrheic blepharitis also had seborrheic dermatitis.

Demodicosis

Demodex infestation, characterized by cylindrical dandruff or sleeves around the eyelashes, has been found in 30% of patients with chronic blepharitis. It is theorized that the infestation and waste of the mites causes blockage of the follicles and glands and/or an inflammatory response. Its role has not been firmly established since Demodex can be found with nearly the same prevalence in asymptomatic patients. Nonetheless, patients with recalcitrant blepharitis have responded to therapy directed at eradicating the Demodex mites.

The exact pathogenesis of blepharitis is unknown, but suspected to be multifactorial.

Staphylococcal blepharitis is believed to be associated with staphylococcal bacteria on the ocular surface. In one study of ocular flora, 46% to 51% of those diagnosed with staphylococcal blepharitis had cultures positive for Staphylococcus aureus as compared to 8% of normal patients. The mechanism by which the bacteria cause symptoms of blepharitis is not fully understood, and may include direct irritation from bacterial toxins and/or enhanced cell-mediated immunity to S. aureus.

Seborrheic blepharitis is characterized by less inflammation than staphylococcal blepharitis but with more oily or greasy scaling. Some patients with seborrheic blepharitis also exhibit characteristics of MGD.

Meibomian gland dysfunction is characterized by functional abnormalities of the meibomian glands and altered secretion of meibum, which plays an important role in slowing the evaporation of tear film and smoothing the tear film to provide an even optical surface.Both quantitative deficiencies in meibum or qualitative differences in its composition can contribute to symptoms experienced in MGD blepharitis.

Diagnosis

The diagnosis of blepharitis is usually based on a typical patient history and characteristic slit-lamp biomicroscopic findings, described below. Ancillary testing, such as conjunctival cultures, can be helpful.

Symptoms of chronic blepharitis may include redness, burning sensation, irritation, tearing, eyelid crusting and sticking, and visual problems such as photophobia and blurred vision. Symptoms are typically worse in the mornings and a patient may have several exacerbations and

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remissions. Administration of a questionnaire, such as the Ocular Surface Disease Index or Dry Eye Questionnaire, may have a role in uncovering or tracking symptoms associated with ocular discomfort in MGD.

While the clinical features of the blepharitis categories can overlap, certain signs and symptoms are more commonly associated with particular subtypes.

Different forms of blepharitis: (A) seborrheic blepharitis, (B) staphylococcal blepharitis, (C) meibomian gland dysfunction. Adapted from images copywritten 2014 one.aao.org

Staphylococcal blepharitis is characterized on examination by erythema and edema of the eyelid margin. Patients may exhibit eyelash loss and/or misdirection, signs that are rarely seen with other types of blepharitis. Other signs may include telangiectasia on the anterior eyelid, hard scales/collarettes encircling the lash base, and corneal changes (infiltrates, phlyctenules). In severe and long-standing cases, eyelid ulceration and corneal scarring may occur.

Seborrheic blepharitis is differentiated by less erythema, edema, and telangiectasia of the lid margins as compared to staphylococcal blepharitis, but an increased amount of oily scale and greasy crusting on the lashes.

Posterior blepharitis/MGD, often associated with rosacea, may be seen clinically by examining the posterior eyelid margin. The meibomian glands may appear capped with oil, be dilated, or be visibly obstructed. The secretions of the glands are usually turbid and thicker than normal. Telangiectasias and lid scarring may also be present in this area. Chalazia may be a cause or consequence of MGD.

In all forms of blepharitis, examination of the tear film may show instability and rapid evaporation. The method most frequently used to assess tear film stability is to measure the tear break-up time (TBUT), i.e., the time interval between a complete blink and the first appearance of a dry spot in the pre-corneal tear film after fluorescein instillation. There is general agreement that a TBUT shorter than 10 seconds reflects tear film instability.

References:

1. Nozimjon O'g'li, S. S., & Maksimovna, M. M. (2022). THE ORIGIN OF MIASTHENIA DISEASE AND METHODS USED IN TREATMENT. Conferencea, 31-33.
2. Nozimjon O'g'li, S. S., & Kasimjanovna, D. O. (2022, November). ORIGIN, PREVENTION OF MENINGITIS DISEASE, WAYS OF TRANSMISSION AND THE USE OF DIFFERENT ROUTES IN TREATMENT. In E Conference Zone (pp. 37-40).
3. Nozimjon O'g'li, S. S. (2022). CAUSES OF THE ORIGIN OF OSTEOCHONDROSIS, SYMPTOMS, DIAGNOSIS AND TREATMENT METHODS. Conferencea, 76-77.

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4. Nozimjon o'g'li, S. S. (2022). INFORMATION ABOUT THE STRUCTURE OF THE MEMBRANE OF EPITHELIAL TISSUE AND GLANDS. British Journal of Global Ecology and Sustainable Development, 10, 65-69.
5. Nozimjon o'g'li, S. S. (2022). First Aid Medication and Remedies for Heart Failure. Academia Open, 7, 10-21070.
6. Nozimjon o'g'li, S. S., & Xasanboy o'g'li, A. A. (2021). Quantitative Indicators of Villi Cells in the Intraepithelial Part of the Small Intestine. EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION, 1(2), 19-21.
7. Дильшода РМ. ЎЗБЕКИСТОН ТАРАҚҚИЁТИНИНГ ЯНГИ БОСҚИЧИДА ХОТИН-ҚИЗЛАР ИЖТИМОИЙ ФАОЛЛИГИ–МАМЛАКАТ ТАРАҚҚИЁТИНИНГ МУҲИМ ОМИЛИ СИФАТИДА. ВЗГЛЯД В ПРОШЛОЕ. 2020;3(4).
8. Рузиева ДМ. ЯНГИЛАНАЁТГАН ЎЗБЕКИСТОН: ОИЛА МУСТАҲКАМЛИГИНИ ТАЪМИНЛАШДА АЁЛ МАЪНАВИЯТИНИНГ ЎРНИ. ВЗГЛЯД В ПРОШЛОЕ. 2020;3(6).
9. Mavlonovna RD. Factors That Increase the Activity of Women and Girls in Socio-political Processes at a New Stage of Development of Uzbekistan. JournalNX.;7(07):61-6.
10. Mavlonovna, R. D. Participation of Uzbek Women in Socio-economical and Spiritual Life of the Country (on the Examples of Bukhara and Navoi Regions). International Journal on Integrated Education, 4(6), 16-21.
11. Mavlonovna, R. D. (2021, May). PARTICIPATION OF WOMEN IN EDUCATION AND SCIENCE. In E-Conference Globe (pp. 158-163).
12. Mavlonovna, R. D., & Akbarovna, M. V. (2021, July). PROVISION OF FAMILY STABILITY AS A PRIORITY OF STATE POLICY. In Archive of Conferences (pp. 34-39).