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An Systemic Review On Conjunctivitis

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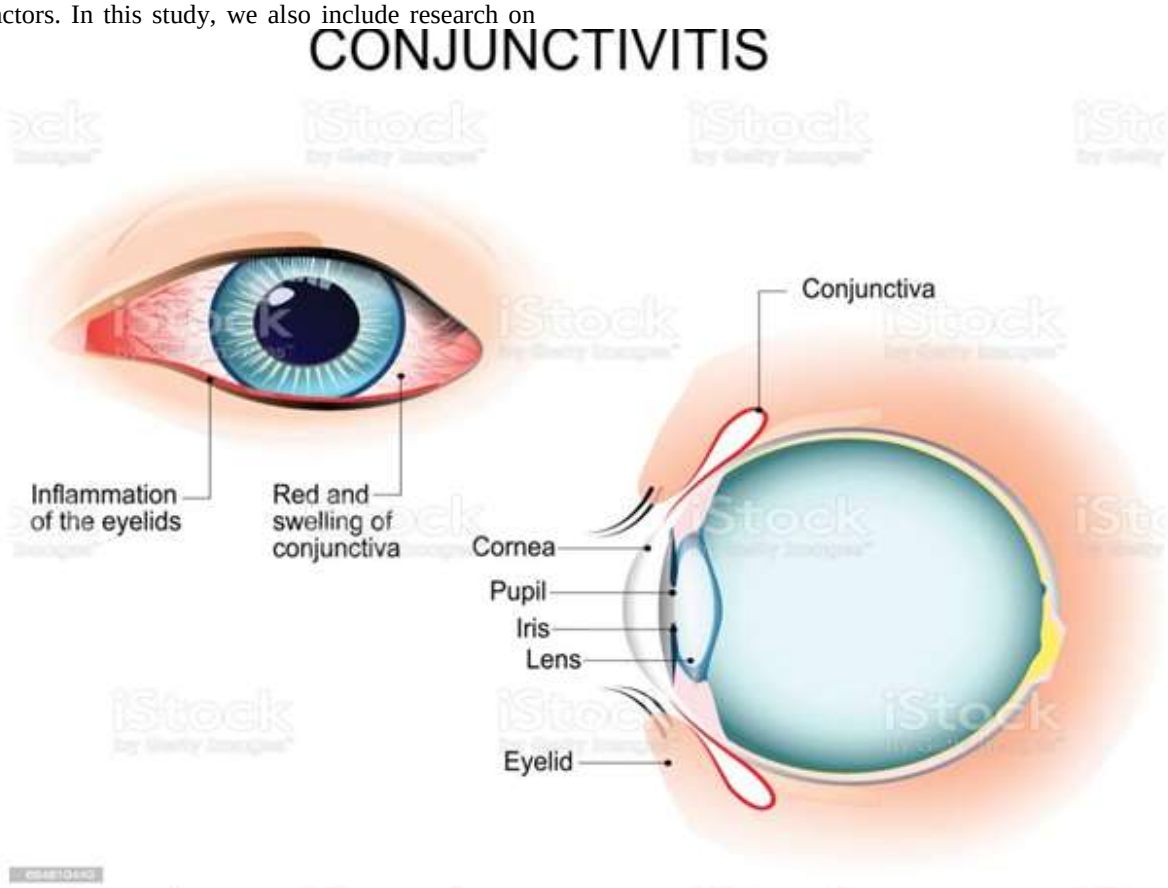
ABSTRACT
Conjunctivitis is an eye disease that affects the eye or the inside of the eye and affects people every day. In case of conjunctivitis, pain, redness, blurred vision, blurred vision, eyelid discomfort and crusting may occur. We have included detailed information about many aspects of conjunctivitis such as various diseases affecting the eye, infections, some allergies and some environmental factors. In this study, we also include research on the treatment, prevention and treatment of conjunctivitis. and many drugs used to treat conjunctivitis

I. INTRODUCTION

• Conjunctivitis is inflammation of the eye tissue. Conjunctivitis usually causes blood vessel occlusion, eye discharge, eye swelling and redness.



Taking India as an example, around 70%-80% of Indians suffer from conjunctivitis and around 70- 75% of cases are caused by bacteria, while 80%-90% of conjunctivitis is caused by adenovirus. More than 80%-85% of cases of acute conjunctivitis are diagnosed by non-physician

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providers (including physicians, nurses, and physicians), which places a heavy financial burden on health and account for multiple visits to various medical specialties. The cost of conjunctivitis treatment is approximately $860 million per year in the United States alone.

• In the early diagnosis of this study, it was determined that approximately 55% of the patients with conjunctivitis would get treatment if they received the appropriate medication from the ophthalmologist, but sometimes some people get better. by a doctor who is not an ophthalmologist and therefore does not have access to appropriate medicine. Antibiotic eye drops have been reported in approximately 60% of patients with conjunctivitis; many get their meds from non-medical providers.

For example, 68 percent of patients admitted to the emergency room received antibiotics, and that number dropped to 36 percent in people who went to the ophthalmologist. Interestingly, patients in better health were increasingly taking medications for conjunctivitis.

Conjunctivitis can be classified in several ways; It can be classified according to its etiology, duration, severity and effect on the surrounding tissue. The etiology of conjunctivitis may be infectious or non-infectious. Viral conjunctivitis followed by bacterial conjunctivitis is the most common cause of infectious conjunctivitis, while allergic and toxin-induced conjunctivitis is the most common non-infectious cause.

In terms of chronic inflammation, conjunctivitis can be divided into acute conjunctivitis lasting less than 4 weeks, subacute conjunctivitis and chronic conjunctivitis lasting more than 4 weeks. [3] Also, conjunctivitis may be marked as severe when the patient's symptoms are severe and there is a mucopurulent discharge. According to,conjunctivitis in blepharoconjunctivitis and viral keratoconjunctivitis can be associated with involvement of surrounding tissues such as eyelids and calluses. It also treats diseases in the body, including conjunctivitis and the immune system. Aa This brought great financial loss. constitute the majority of the treatment burden and visits in various medical specialties. The cost of conjunctivitis treatment is approximately $860 million per year in the United States alone.

• Approximately 60% of patients with conjunctivitis reported receiving eye drops; many get their meds from non-medical providers. For example, 68 percent of patients admitted to the emergency room received antibiotics, and that number fell to 36 percent of those who went to the doctor. [1] Interestingly, patients with a healthy lifestyle are more likely to take and maintain medication for conjunctivitis. [1]There are many ways to classify conjunctivitis; It can be classified according to its etiology, duration, severity and relationship with the surrounding tissue. The etiology of conjunctivitis may be irresistible or non-contagious.After viral conjunctivitis, viral conjunctivitis is the most common cause of irresistible conjunctivitis, while adverse predisposing conjunctivitis and toxin-induced conjunctivitis are the most common non-infectious etiologies. At the same time, conjunctivitis can be divided into acute, sudden onset, lasting four weeks or less, subacute and persistent lasting more than four weeks. [3]

Additionally, conjunctivitis may be marked as severe when the patient presents with unexpected symptoms and mucopurulent discharge. Conjunctivitis may be associated with blepharoconjunctivitis and keratoconjunctivitis involving surrounding tissues such as eyelids and callusalon. In addition, conjunctivitis can be associated with systemic diseases, including the immune system.This has a huge financial impact on treatment and requires multiple visits to doctors in many specialties. Conjunctivitis treatment generates approximately $860 million in annual revenue in the United States alone.Approximately 60% of patients with severe conjunctivitis have been shown to receive eye drops; many get their meds from non-medical providers. For example, 68 percent of patients presenting to the emergency room received eye antibiotics, and that number dropped to 36 percent of ophthalmologists. [1] Interest next patients.conjunctivitis Business is likely to buy and dispense medication for conjunctivitis.

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•ALLERGIC CONJUNCTIVITIS

Eye allergies are common. The number of allergic diseases has increased over the past few decades, and the increase is thought to be due to many factors, including genetics, urban air pollution, and exposure to pets and children. 28-30 Allergic conjunctivitis is a hat covering seasonal allergies. Conjunctivitis (SAC), perennial allergic conjunctivitis (PAC), vernal keratoconjunctivitis (VKC), and atopic conjunctivitis (AKC). Giant papillary conjunctivitis (GPC) associated with contact lenses or ocular prostheses usually falls into this category, but GPC is a microtraumatic disease of the eye rather than an allergic disease.

SAC and PAC are the most common eye diseases affecting 15% to 20% of the population.[31]Specific IgE antibodies are found in almost all cases of SAC and PAC. 30 The pathogenesis of allergic conjunctivitis is generally IgE-mediated hypersensitivity, in which allergens interact with IgE that binds to sensitized mast cells, causing degranulation. This mast cell degranulation leads to increased levels of histamine, prostaglandins and leukotrienes and induces activation of vascular endothelial cells to express chemokines and adhesion molecules. This early intervention takes 20 to 30 minutes.[29]Release of chemokines causes activation of inflammatory cells in the conjunctival mucosa, resulting in a delayed inflammatory response due to infiltration of inflammatory cells that occurs hours after the onset of hypertrophy. Hand in hand.[32]Signs and symptoms are similar to SAC or PAC. SAC is mainly caused by airborne pollen, occurs in spring and summer and is weak in winter. PAC occurs once a year when patients are allergic to their sensitivities.SAC and PAC symptoms include itching, redness, and swelling. Irritation is a common symptom of SAC and PAC. Assays,

"If you itch, it's an allergy." Fortunately, the effect on bone is rare.

Contact anaphylaxis usually occurs on the skin, including the eyelids, but contact anaphylaxis can also occur on the conjunctiva.[33]After infection, the skin becomes red, tight, and itchy. Treatment should not be in contact with the disease. Topical and oral antihistamines, topical steroids, and cold compresses may help relieve symptoms.

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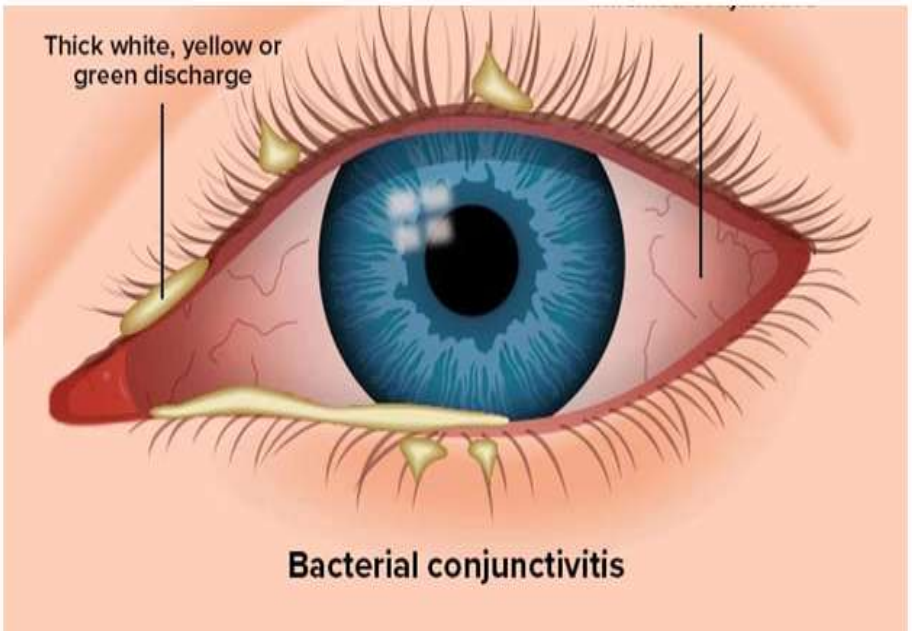
• BACTERIAL CONJUNCTIVITIS



While viral conjunctivitis is more common, bacterial conjunctivitis (BC) can be more of a clinical challenge. It's the second most commonly occurring infectious cause in a conjunctivitis presentation.[5],[17] BC is far more common in children than adults, and the pathogens responsible for BC vary depending on the age group. The most common cause of BC in children is Haemophilus influenzae, followed by Streptococcus pneumoniae and Moraxella catarrhalis.[24]

Bacterial infection in adults are more often staphylococcal in origin, with Staphylococcus aureus more commonly found in adults, with an increase in conjunctivitis secondary to methicillin-resistant Staphylococcus aureus (MRSA).[7]Gram-negative infections are more prevalent in contact lens wearers, with Pseudomonas aeruginosa the most common cause in this group.[25]Pseudomonas is also the most likely cause of BC in the critically ill and hospitalized patient.[7]Acute BC in newborns is typically the result of Neisseria gonorrhoeae and Chlamydia trachomatis.BC can be divided into three clinical presentations: acute, hyperacute and chronic.10 The most common pathogens are the aforementioned Staphylococcus aureus, Streptococcus pneumoniae and Haemophilus influenzae.[10]

Signs and symptoms of acute BC include the rapid unilateral onset of a red eye, purulent or mucopurulent discharge, and conjunctival edema. The second eye typically becomes involved one or two days later.[10]Bilateral eyelid mattering and eyelids sticking together, a lack of itching, and no history of prior conjunctivitis exposure are strong positive predictors of acute BC.[26]

Acute BC treatment consists of topical antibiotic drops or ointments. While BC infections are normally self-limiting within one to two weeks of presentation, antibiotic therapy speeds resolution and lessens disease severity.[17] A broad spectrum antibiotic may be used for five to seven days. No clinical evidence suggests one antibiotic is better than another.[12]Hyperacute BC is most often caused by Neisseria gonorrhoeae.The disease presents with a severe copious purulent discharge, decreased vision, often eyelid swelling, eye pain on palpation and preauricular adenopathy. The infection carries a high risk if corneal involvement and subsequent corneal perforation.[27] Conjunctival cultures are strongly recommended in this presentation. The treatment regimen for gonococcal conjunctivitis includes one gram of intramuscular ceftriaxone. If acorneal ulcer is present, hospitalization with one gram of IV ceftriaxone for three days is recommended.[10]

Chronic bacterial conjunctivitis is used to describe any conjunctivitis lasting more than three weeks, with Staphylococcus aureus, Moraxella lacunata and enteric bacteria being the most common culprits.[10]A chronic staphylococcal

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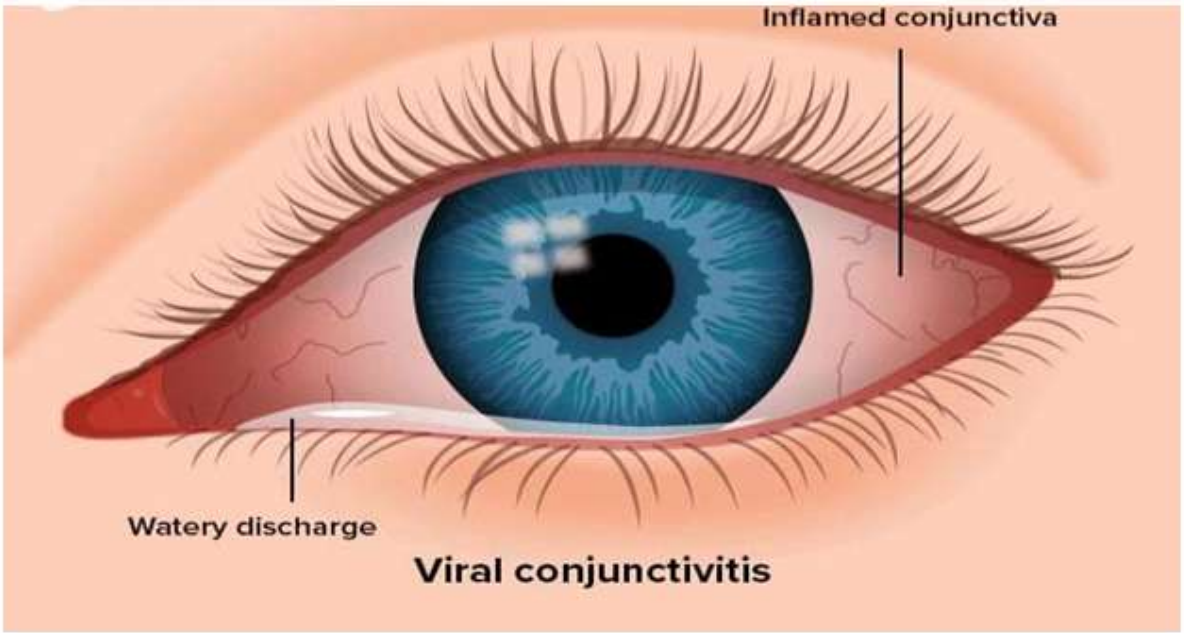
conjunctivitis may display signs including a diffuse conjunctival redness with minimal discharge. Papillae or follicles may be present as well as eyelid involvement which may show redness, lash loss, dilated small blood vessels, lid collarettes, recurrent hordeola and may lead to marginal corneal ulcers. The treatment of chronic BC includes antimicrobial therapy and good lid hygiene. Azithromycin drops, erythromycin and bacitracin ointments are effective topical antibiotics. Combination antibiotic/steroid drops or ointments can be rubbed into the lid margins if severe inflammation is present.Oral tetracycline-class antibiotics may be needed for more severe presentations. [10]

• VIRAL CONJUCTIVITIS

Infections cause up to 80% of all cases of intense conjunctivitis, with numerous cases misdiagnosed as bacterial conjunctivitis. Between 65% and 90% of viral conjunctivitis (VC) are caused by adenoviruses and they deliver the three most common introductions related with VC; follicular conjunctivitis, pharyngoconjunctival fever and scourge keratoconjunctivitis.



Follicular conjunctivitis is the mildest frame of a viral conjunctival disease. It has an intense onset, at first one-sided with the moment eye getting to be included in a week. It presents with a watery release, conjunctival redness, follicular response and a preauricular lymphadenopathy on the influenced side. Most cases resolve spontaneously.[10]Pharyngoconjunctival fever is characterized by a tall fever that comes on all of a sudden as well as a sore throat, periauricular lymph hub broadening and a respective conjunctivitis.Epidemic keratoconjunctivitis, the more serious of the two, presents with an ipsilateral lymphadenopathy, conjunctival redness, swelling and watery discharge.[11] Lymphadenopathy is seen in up to 50% of VC cases and is more predominant in VC than bacterial conjunctivitis.[9]

Labs and societies are once in a while essential to affirm bacterial conjunctivitis and is for the most part saved for extreme or hard-headed cases.12 In-office fast antigen testing is accessible for adenoviruses and can be utilized to affirm suspected viral causes of conjunctivitis to anticipate superfluous anti-microbial utilize. The Quidel QuickVue (Quidel) adenoviral conjunctivitis test may be a fast, immunochromatographic test for visual, subjective in vitro location of adenoviral antigens straightforwardly from visual liquid. A consider comparing fast antigen testing with polymerase chain response and viral culture and corroborative immunofluorescent recoloring found quick antigen testing tohave an 89% affectability and 94% specificity.[13]

Adenoviral conjunctivitis is profoundly infectious, with the chance of transmission around

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50%.The contamination is frequently named scourge keratoconjunctivitis due to the adenovirus' capacity to quickly contaminate family individuals, classmates or co-workers. The infection spreads through coordinate contact with fingers, swimming pool water and individual things and can be spread for up to 14 days.16-18 With such tall transmission rates, hand washing is basic. One thinkabout found 46% of tainted people had positive societies developed from swabs of their hands.Patients with conceivable adenoviral disease ought to be disconnected from other patients within the office and all rebellious and surfaces must be sanitized after potential exposure.[19]

While no successful treatment for VC exists yet, strong measures to assist with indications incorporate counterfeit tears, topical antihistamines and cold compresses.[12]Accessible antiviral medicines are not valuable and topical anti-microbials are not indicated.[20],[21]Povidone iodine—a wide range antimicrobial with tall microbial slaughter rates—Δcan be utilized in a 5% ophthalmic planning off-label for administration of adenoviral conjunctivitis.[22]In truth, a topical ophthalmic suspension of povidone iodine 0.6% and dexamethasone 0.1% is beneath clinical investigation.[23]This pharmaceutical has the potential to treat both the viral and provocative components of adenoviral disease as well as immune-related sequelae such as subepithelial infiltrates.

• ENVIRONMENTAL FACTOR THAT CAUSE THE CONJUCTIVITIS

Air pollution, pollution and drugs, diseases, smoking, many drugs, soil changes, temperature changes, electricity, UV rays, cosmetic exercises, etc. Factors surrounding the eye such as the cornea and conjunctiva. in everything. Cataract, conjunctivitis, glaucoma and dry eyes. The eyes are diseases that affect the air and the environment. However, the structure of the eye is always exposed to dust, wind, light, etc. It protects from foreign objects but must be clear to see. Prolonged exposure to air and water pollution can cause eye damage ranging from mild irritation to eye bleeding.

Showering with dirty water can cause eye damage and vision loss over time. Exposure to noise, street lights, global warming, intense infrared and ultraviolet radiation can damage our vision. This article examines the role of the environment in eye health.Red, swollen and watery eyes are symptoms of any type of conjunctivitis. However, the child reacted normally and did not see.Conjunctivitis is inflammation of the conjunctiva characterized by itching and redness.

Light examination (biological microscopy) can improve the accuracy of the diagnosis. The diagnosis of the palpebral conjunctiva covering the inner part of the eyelid is usually more diagnostic than the diagnosis of the bulbar conjunctiva covering the sclera.

• CONJUNCTIVITIS (VIRAL) SIGNS AND SYMPTOMS

In which viral conjunctivitis generally 65% to 90% of conjunctivitis cases are caused by adenoviruses. [7] Viral conjunctivitis is often associated with upper respiratory tract infections, the common cold, or sore throat.Symptoms include excessive watering and itching. The infection usually starts in one eye but can easily spread to the other. Viral conjunctivitis presents as thin, diffuse red in the conjunctiva which can be confused with iritis, but under the microscope there is an obvious result, there may be multiple lymphoid tissue follicles, especially in the palpebral conjunctiva mice ophthalmia.

• CONJUNCTIVITISSIGNSANDSYMPTOMS (ALLERGIC FEATURES)

Eyes with allergic conjunctivitis produce conjunctival edemaAllergic conjunctivitis is inflammation of the conjunctiva due to allergies.[8] Specific allergies may vary from patient to patient. Symptoms result from the release of histamine and other active substances from mast cells and include redness (due to dilation of small peripheralblood vessels), conjunctival swelling, itching and discharge. [Also necessary

•CONJUNCTIVITIS(BACTERIAL)SIGNS AND SYMPTOMS

Eye with conjunctivitisConjunctivitis causes the eye to be red, dull, and sticky.Usually symptoms appear in one eye first, but spread to the other eye within 2-5 days. Conjunctivitis is caused by an infection that causes roughness or irritationand causes a sticky, opaque, gray or yellow discharge that causes the eyes to close, especially after sleep.Crusts may also appear on the eyes and surrounding skin. Sometimes this feeling is not good or itching occurs in many places, and in this case, patients can understand that there is a foreign object in their eyes.Bacterial infections are

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caused by Staphylococcus, Streptococcusand Haemophilus species Less thanChlamydia.

• MEMBRANOUSCONJUNCTIVITIS

Chlamydia trachomatis or Moraxella sp. It can cause a persistent infection that doesn't ooze but doesn't have much redness. Conjunctivitis can cause the formation of a membrane or pseudomembrane covering the conjunctiva.The pseudomembrane contains inflammatory cells and exudate, and loosely adheres to the conjunctiva, while the true material adheres more firmly and is not easy to peel off. Conjunctivitis is associated with Neisseria gonorrhoeae, beta hemolytic streptococci and Corynebacterium diphtheriae and forms membranes or pseudomembranes.Corynebacterium diphtheriae causes conjunctival infection in unvaccinated children.

•SIGNS AND SYMPTOMS OF CONJUNCTIVITIS (Chemistry)

Chemical eye damage occurs when acidic or simple chemicals enter the eye.Alkali burns are generally more severe than acid burns. A minor burn may cause conjunctivitis, and a large burn may cause whitening of the ear. Litmus paper can be used to test drugs.

When a chemical is detected, one or more eyes should be irrigated until the pH reaches 6-8. Eye drops can be used to reduce pain.The main feature of Itchy or toxic conjunctivitis is redness. Because of the poison, it is only in the lower conjunctival sac. With some drugs, especially caustics such as sodium hydroxide, conjunctival necrosis, pseudowhite eyes due to vascular closure and subsequent shedding of dead epithelium may occur. Slit lamp examination may show signs of anterior uveitis.

• CONJUNCTIVITISSIGNS AND SYMPTOMS (BIOMAKER)

Omics technologies have been used to identify biomarkers that can indicate the presence and progression of the disease. For example, in inflammatory conjunctivitis, reactive oxygen phospholipids, lysophospholipids, fatty acids, and endocannabinoids, which are potential biomarkers associated with the inflammatory process, are altered.

- SIGNS AND SYMPTOMS OF CONJUNCTIVITIS (CHLAMYDIAL CONJUNCTIVITIS)
- Eye with chlamydial conjunctivitisNeonatal inclusion body conjunctivitis is a type of conjunctivitis caused by the bacteria Chlamydia trachomatis and can cause purulent conjunctivitis. However, it usually heals on its own.

•CLINICAL EXAMINATION

Some initial testing is necessary to rule out any possible cause of pink eye. Clinical signs for evaluation include pain or photophobia, which may be a sign of keratitis, anterior uveitis, or acute angle-closure glaucoma. [39]

Upper respiratory tract infection or similar symptoms known to others who have experienced it indicate the type of conjunctivitis infection. Ocular trauma in the patient's history should be considered as a possible cause of inflammation. Corneal abrasions may appear as red eye due to foreign objects or exposure to sunlight or ultraviolet light.[39]Red eyes, pain and tears caused by a foreign body in the cornea or conjunctiva can appear as chronic and chronic conjunctivitis. The presence of foreign bodies can be confirmed by history and careful slit-lamp examination. The risk of bone involvement and keratitis is higher in mask wearers; therefore, these people should be referred to an ophthalmologist. Some signs and symptoms of severe disease[39]Dry eye-like conjunctivitis, eg hyperemia, wheezing and stinging. 40 Adaptation and risk to triage problems The analyzes recommended by the Tear Film and Ocular Surface Society Workshop II (TFOS DEWS II) 40 help rule out dry eye disease, but dry eye and infection may occur due to dry eye. present with acute conjunctivitis.[32]In immune-mediated diseases (e.g. ophthalmic pemphigoid, graft-versus-virus, Stevens-Johnson syndrome), usually in early and mild cases of infectious disease Voluntary discomfort associated with symptoms of severe conjunctivitis (e.g., redness, tearing, clear discharge) and conjunctival hyperemia . However, this conjunctivitis is generally different from chronic conjunctivitis; is usually longer and more easily confused with a longer process than the initial pain.[1]

Medication history can also provide valuable information. For example, anticoagulants have been associated with subconjunctival hemorrhage and topiramate has been associated with angle-closure glaucoma. Patients requiring steroids may be at risk for more serious illness or other illness and referral to an ophthalmologist is

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recommended. Diagnosis should include examination of the lymph nodes (submandibular and preauricular).[2]

Lymphadenopathy, such as enlarged, tender preauricular lymph nodes, is more common in the disease than conjunctivitis.An eye exam should check for visual acuity, pattern, cornea, abnormal size or shape, eyelid swelling, and orbital protrusion or asymmetry. These include visual impairment, moderate to severe pain, purulent discharge or bone involvement.[1],[2]

Useful information can be obtained with a simple pencil light (no need to turn on the light), especially when measuring and excluding anterior chamber depth2 The presentation of conjunctivitis is different but teary, clear to white, red, and bilateral conjunctivitis is common.Viral conjunctivitis usually starts in one eye and develops in the other eye within a few days. [15] Eyelid adhesions, absence of itching and no history of conjunctivitis suggest bacterial conjunctivitis. [9]

The diagnosis of conjunctivitis proposed by Van Weert et al suggests that adults with conjunctivitis who wake up without eyelid adhesions will rarely have conjunctivitis; This risk increases with age and doubles with the presence of eye fusion. The slit set provides a more detailed view of the infection, allowing differentiation of different types of infection (follicular, most contagious; papillary, most allergic; pseudomembranous, severe EKC; eosinophilic, allergic). Fluorescent staining combined with light analysis reflects the corneal fluorescence uptake pattern and reveals anterior chamber disease.[39] HSV infection usually occurs as a highly virulent virus, while the large virus without viral endospheres is the VZV virus.

*VARIOUS MEDICATION THAT ARE USE IN THE TREATMENT OF CONJUCTIVITIS

- Prevention or treatment of conjunctivitis 65% of patients recover within 2-5 days without treatment. In most cases, antibiotics are not necessary.

•PREVENTION OF INFECTIOUS DISEASE

The management of infectious diseases focuses on the physician's assessment and decision to start antibiotics based on his or her assessment of response to treatment, history of disease if untreated, antibiotics, and antibiotic management philosophy. Many medical conditions make the diagnosis of conjunctivitis more common; however, the variability in presentation remains. It can be difficult to distinguish bacterial conjunctivitis from other etiologies, and practitioners often mistakenly choose empirical antibiotics. [3] Studies show that about 50 percent of conjunctivitis in children is caused by bacteria, and doctors prescribe antibiotics for 80 to 95 percent of patients. [3][10] Ophthalmologists use antibiotics in fewer patients than general practitioners.[3][10]

It has been shown that antibiotic treatment reduces symptoms, improves over time, reduces infection, and provides rapid return to school or work. [2][3][6][7]The history of the disease that does not cure the disease is the resolution of the disease in a week. [4] Another consideration is the ongoing pattern of ocular disease. [6]With the knowledge of the management of the changes described, resistant diseases can be treated with or without antibiotics in the future. [2] It should be included in antibiotic therapy in difficult cases of infection, use of contact lenses, and suspected gonococcal or chlamydial infection.[2] If a decision is made to initiate empirical therapy, the antibiotic of choice should be broad-spectrum, including Gram-positive and Gram-negative ocular bacteria. [6] Topical aminoglycosides, polymyxin B combination drugs, macrolides and fluoroquinolones are the most commonly used ophthalmic drugs. [2][6][8] The duration of treatment is usually five to seven days. [6]Recently, data have shown the emergence of resistance to most of these drugs. [6] Topical erythromycin has been a treatment for years. However, microbial resistance and superior immunity to Haemophilus influenzae limit its effectiveness.

Ointment polymyxin B / trimethoprim and many fluoroquinolones are used in most cases of acute conjunctivitis. [1][6]

Newer fluoroquinolones have the least evidence; but they are very costly. [6] It should be considered in areas where local antibiotic use is increasing. [1][8] Conjunctivitis secondary to gonococcal or chlamydial infection requires treatment. [2] Oral antibiotics are also indicated in conjunctivitis complicated by acute otitis media.[6] Neonatal ophthalmia secondary to C. trachomatis requires 14 days of oral or intravenous erythromycin in addition to topical erythromycin. [1][11][12]When gonorrhea is the cause of neonatal infection, hospitalization, a dose of intravenous or intramuscular ceftriaxone and eyewash solution until the infection clears. [2]If symptoms do not improve after one to two days, monitoring for

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serious bacterial infections should be encouraged. [4]

•PREVENTIONOF VIRALCONJUNCTIVITIS

Viral conjunctivitis treatment aims to improve symptoms rather than eliminating the self-limited infection. It takes about 3 weeks for conjunctivitis to resolve. Treatment includes lubricating with artificial tears up to four times a day or over-the-counter tears up to ten times a day. Applying a cold compress with a wet cloth around the eyes can reduce symptoms. To prevent the disease from infecting other eyes or people, patients should wash their hands well, wash their hands regularly, do not share towels or files, and should not touch their eyes.

The disease is considered contagious when a person's eyes are red and watery.If a membrane or pseudomembrane is present, it can be peeled off the ampoule to improve patient comfort and prevent scarring. The membrane can be peeled off with jewelry forceps or a cotton swab impregnated with local anesthetic. Steroids can help reduce symptoms. However, they can also make bacteria last longer.

Patients should be warned that they are very contagious and should not go to work or school until symptoms resolve. They can still become infected while using steroids without any symptoms to indicate that they are infected. Steroids should be reserved for patients with impaired vision due to subepithelial infiltration or poor vision due to severe conjunctival injection causing visual impairment. [30][31]The use of povidone-iodine, a non-specific antibiotic, is a promising new treatment for adenoviral conjunctivitis. [25] This is an inexpensive and widely used antibiotic used as part of sterile preparation for ophthalmic surgery.It can kill bacteria outside the cell, but has no effect on bacteria inside the cell. It does not provide protection as its mechanism of action is not immune. In infants with adenoviral conjunctivitis, a single dose of povidone-iodine 2.5% reduces symptom severity and recovery time without serious adverse effects. [32]

Topical corticosteroids alone are contraindicated in epithelial herpes simplex keratitis and have been associated with prolonged viral shedding and infection.[29]Corticosteroids have been shown to be effective and efficient in the treatment of bacterial and viral conjunctivitis infections when used together with antibiotics. [33] [34]

• PREVENTION OF ALLERGIC CONDITION

Avoiding causative antigens is an important behavior in any allergic reaction; However, the eye has a large area, so the effect of the eye is often unavoidable in air allergies. Replacement tear products provide barrier function and help develop the first line of defense at the conjunctival-mucosal level. These attendants help dilute the various allergens and inflammatory mediators that may be present on the surface of the eye and clean the ocular surface of the workers. When avoiding non-pharmacological strategies does not provide sufficient relief, local therapy or systemic therapy may be given to reduce allergic reactions.

The mainstay of blindness treatment is the use of anti-allergic drugs such as immunosup pressants, multiple antibiotics and mast cell therapy stabilizers.For example, topical application of the H1 topical antihistamine levocabastine hydrochloride is effective for rapid treatment of ocular pain [34,35].

Antihistamines compete and reverse to block histamine and reduce itching and redness, but are short-lived. This drug does not affect other anti-inflammatory drugs such as prostaglandins and leukotrienes, which are also weak. The working time is limited, it needs to be injected frequently up to four times a day, and antibiotics can cause eye irritation, especially if used for a long period of time [36]. Combinations with decongestants and antihistamines have been shown to be more effective with 4 instillations per day [37].Decongestants often act as vasoconstrictors and are effective in reducing erythema, but side effects include burning and stinging on instillation, mydriasis, rebound congestion, or drug-induced conjunctivitis [37].Therefore, these treatments are only indicated for short-term symptoms and are not recommended for patients with narrow-angle glaucoma.

The mechanism of action of mast cell stabilizers is unknown. They can cause calcium to enter cells, prevent membrane changes, and/or reduce membrane fluidity prior to mast cell degranulation. The end result is reduced mast cell degranulation, which prevents the release of histamine and other chemokines in the preformed and newly formed state.

Mast cell stabilizers do not reduce existing symptoms and can be used prophylactically to prevent mast cell degranulation and subsequent exposure to allergens. Mast cell stabilizing drugs

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can also be used in the eyes and may be appropriate for more severe conditions. They need a loading time when they need to apply before the antigen is available. Therefore, poor performance should be considered bad performance.Antibody antagonist activity of histamine such as olopatadine, ketotifen, azelastine, epinastine and bepostatin in recent years, stabilization of mast cell degranulation and mast cell pole. activation and activation. Eosinophilic infiltration [38].Ketotifen inhibits eosinophil activation, leukotriene production and cytokine release [39,40].

Azelastine is a selective second generation H1 receptor antagonist that also acts by inhibiting platelet activating factor. The efficacy of immunosuppression for ocular symptoms caused by antigenic conjunctival challenge was first demonstrated in 1911 and this evidence will be evaluated for long-term use. Time control of AC [50]. While some recent research has focused on nasal symptoms rather than eye symptoms, other studies have shown an immune response to eye symptoms [50-56].

Allergen-specific immunotherapy is an effective treatment for patients with rhinoconjunctivitis who have IgE antibodies to allergens. The main goal of this therapy is to provide a long-term treatment for an allergy: it reduces the seasonal increase in allergen-specific IgE and causes the production of IgG4 and IgA; this effect was achieved by increasing IL-10 and TGF-β1. construction [57].However, for allergies, the immune system does not predict the outcome of treatment, and the treatment itself may produce antibodies that vary in outcome and severity depending on the type of allergy administered [58,59].

Traditionally, immunotherapy is given by subcutaneous injection. However, sublingual (oral) immunotherapy (SLIT) is used more in people with allergies. SLIT requires further investigation for eye irritation; it has been shown to control ocular signs and symptoms, although ocular symptoms may be less sensitive than nasal symptoms [60–65].

Oral antihistamines are often used to treat nasal and eye symptoms.These newer second-generation antihistamines are preferred over first-generation antihistamines as they are less likely to cause side effects such as fatigue [3]. However, secondary reactions can interfere with the protective mechanisms of the tear system, causing facial dryness, which can cause allergic symptoms. Therefore, it has been suggested that concomitant use of eye creams may be more effective in treating eye symptoms [67].

Intranasal corticosteroids are effective in treating the nasal symptoms of allergic rhinitis, but there is evidence that they may also be effective in the treatment of ocular symptoms [68–70].Avoidance of problem antigens is an important variable in all types of rhinitis. allergic conjunctivitis; However, the eye has a large area, so the effect of the eye is often unavoidable in air allergies.

Replacement tear products provide barrier function and help develop the first line of defense at the conjunctival-mucosal level. These attendants help dilute the various allergens and inflammatory mediators that may be present on the surface of the eye and clean the ocular surface of the workers. When avoiding non-pharmacological strategies does not provide sufficient relief, local therapy or systemic therapy may be given to reduce the allergic reaction.

The mainstay of treatment of eye allergies is the use of anti-allergic drugs such as anti-inflammatory drugs, multi-antibiotics and mast cell stabilizers. For example, topical application of the H1 topical antihistamine levocabastine hydrochloride is effective for rapid treatment of ocular pain [34,35].

Antihistamines compete and reverse to block histamine and reduce itching and redness, but are short-lived. This drug does not affect other anti-inflammatory drugs such as prostaglandins and leukotrienes, which are also weak. Working time is limited, needs to be injected frequently up to four times a day, and antibiotics can cause eye irritation, especially if used for a long period of time [36]. Combinations with decongestants and antihistamines have been shown to be more effective with 4 vaccinations per day [37].

Decongestants often act as vasoconstrictors and are effective in reducing erythema, but side effects include burning and stinging on instillation, mydriasis, rebound congestion, or drug-induced conjunctivitis [37].Therefore, these treatments are only indicated for short-term symptoms and are not recommended for patients with narrow-angle glaucoma.The mechanism of action of mast cell stabilizers is unknown. They can prevent membrane changes by causing calcium to enter cells and/or reduce membrane fluidity prior to mast cell degranulation. The end result is reduced mast cell degranulation, which prevents the release of histamine and other chemokines in the preformed and newly formed

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state.Mast cell stabilizers do not reduce existing symptoms and can be used prophylactically to prevent mast cell degranulation after exposure to allergens.

While some recent research has focused on nasal symptoms rather than eye symptoms, other studies have shown an immune response to eye symptoms [50-56].

Allergen-specific immunotherapy is an effective treatment for patients with allergic rhinoconjunctivitis that targets allergen-specific IgE antibodies. The main goal of this therapy is to provide a long-term treatment for an allergy: it reduces the seasonal increase in allergen-specific IgE and causes the production of IgG4 and IgA; this effect was achieved by increasing IL-10 and TGF-β1. construction [57].

However, the immune response to allergies does not predict the outcome of treatment, and the treatment itself may produce antibodies whose outcome and severity depend on the type of allergen administered [58,59].

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However, secondary reactions can interfere with the protective mechanisms of the tear system, causing facial dryness, which can cause allergic symptoms. Therefore, it has been suggested that concomitant use of eye creams may be more effective in treating symptoms of visual disturbances [67]. Intranasal corticosteroids are effective in treating the nasal symptoms of allergic rhinitis, but there is evidence that they may also be effective in the treatment of ocular symptoms [68–70].

II. CONCLUSION

Conjunctivitis is associated with about 1 p ercent of all primary care visits, with an estimated a nnual cost of conjunctivitis alone of $377 million t o $857 million. [3],[5]

Relying on signs and symptoms often leads to misd iagnosis. Herpes is the most common cause of infec tion, followed by nonviral conjunctivitis, viral conj unctivitis. Allergic conjunctivitis affects approxima tely 40% of the population, but only a small propor tion seek treatment. 15.81 Most cases of conjunctiv itis are due to adenovirus.

Antibiotics are not effective against infectious diseases and should be avoided as they c an cause adverse reactios. Prompt use of antibiotics is a reasonable strategy to diagnose conjunctivitis and prevent unnecessary antibiotic use. Bacterial i nfection is isolated in only 50% of people with susp ected conjunctivitis, conjunctivitis and self-limiting without correction in at least 60% (diagnos is is suspected from culture). Cultures are useful in the treatment of acute, chronic and chlamydial conj unctivitis. Antibiotic therapy is generally recomme nded for facial wearers, patients with mucopurulent infections and eye infections, patients with suspect ed chlamydial and gonococcal conjunctivitis, and p atients with visual disease.

Benefits of antibiotics include early resolution of in fection, before returning to work or school, and red ucing the risk of conjunctivitis disease. Most allergi c diseases are caused by seasonal allergies. Antihis tamines, mast cell inhibitors and topical steroids (s ometimes) are indicated for the treatment of allergi c conjunctivitis. Steroids should be used with cauti on and only after a thorough eye examination to av oid infection or bone deterioration. Steroids can ma ke the pain worse.

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