



A CASE REPORT OF ACUTE CONJUNCTIVITIS TREATED WITH HOMOEOPATHIC MEDICINE BELLADONNA

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ABSTRACT

Conjunctivitis is a commonly encountered condition in ophthalmology clinics throughout the world. More than 80% of all acute cases of conjunctivitis are reported to be diagnosed by non-ophthalmologists. In the management of suspected cases of conjunctivitis, alarming signs for more serious intraocular conditions, such as severe pain, decreased vision, and painful pupillary reaction, must be considered. Additionally, a thorough medical and ophthalmic history should be obtained and a thorough physical examination should be done in patients with atypical findings and chronic course. Viral conjunctivitis remains to be the most common overall cause of conjunctivitis. Bacterial conjunctivitis is encountered less frequently and it is the second most common cause of infectious conjunctivitis. Allergic conjunctivitis is encountered in nearly half of the population and the findings include itching, mucoid discharge, and eyelid oedema. Long-term usage of eye drops with preservatives in a patient with conjunctival irritation and discharge points to the toxic conjunctivitis as the underlying cause. Effective management of conjunctivitis includes timely diagnosis, appropriate differentiation of the various etiologies, and appropriate treatment. Similar Homoeopathic medicine based on totality of symptom is the best approach of treating Acute Conjunctivitis, although there are many homoeopathic medicine which are highly indicated in cases of Acute conjunctivitis. Belladonna is one of them, indicated in Acute inflammation of conjunctiva with face red, hot, and swollen. Congestion of Blood around the eyes, brilliant red blood vessels, and contracted pupils.

KEYWORDS – Conjunctivitis, Ophthalmology, Homoeopathy, Belladonna.

INTRODUCTION

The conjunctiva is the transparent, lubricating mucous membrane covering the outer surface of the eye. It is composed of two parts, the "bulbar conjunctiva," which covers the globe, and the "tarsal conjunctiva," which lines the eyelid's inner surface.

Conjunctivitis refers to the inflammation of the conjunctival tissue, engorgement of the blood vessels, pain, and ocular discharge. It can be acute or chronic and infectious or non-infectious. Acute conjunctivitis refers to symptom duration of 3 to 4 weeks from presentation (usually only lasting 1 to 2 weeks), whereas chronic is defined as lasting more than four weeks.

Inflammation Conjunctivitis, also known as pink eye is inflammation of the outermost layer of the white part of the eye and the inner surface of the eyelid. It makes the eye appear pink or reddish. Pain, burning, scratchiness, or itchiness may occur.

The most common infectious causes are viral followed by bacterial. Viral infection may occur along with other symptoms of a common cold, both viral and bacterial cases are easily spread between people. Allergies to pollen or animal hair are also a common cause. Apart from being caused by various infective agents, conjunctivitis may also be associated with some systemic illnesses, including immune-related disorders, such as Reiter syndrome, Stevens-Johnson syndrome, nutritional deprivation (especially vitamin A deficiency), and congenital metabolic syndromes.

Diagnosis is often based on signs and symptoms. Occasionally, a sample of the discharge is sent for culture. Prevention is partly by handwashing. Treatment depends on the underlying cause.

DEFINITION

Inflammation of the conjunctiva (conjunctivitis) is classically defined as conjunctival hyperaemia associated with a discharge which may be watery, mucoid, mucopurulent or purulent.

ETIOLOGY

A. Predisposing factors - flies, poor hygienic conditions, hot dry climate, poor sanitation and dirty habits.

B. Causative organisms.

- *Staphylococcus aureus*
- *Streptococcus pneumoniae* (pneumococcus)
- *Haemophilus influenzae* (aegyptius, Koch- Weeks bacillus). It classically causes epidemics of mucopurulent conjunctivitis, known as 'red-eye' especially in semitropical countries.
- *Pseudomonas pyocyanea*
- *Neisseria meningococcus*
- *Corynebacterium diphtheriae*

TRANSMISSION

Conjunctiva may get infected from three sources, exogenous, local surrounding structures and endogenous, by following modes:

1. Exogenous infections may spread: (i) directly through close contact, as air-borne infections or as water-borne infections; (ii) through vector transmission (e.g., flies); or (iii) through material transfer such as infected fingers of doctors, nurses, common towels, handkerchiefs, and infected tonometers.
2. Local spread may occur from neighbouring structures such as infected lacrimal sac, lids, and nasopharynx. In addition to these, a change in the character of relatively innocuous organisms present in the conjunctival sac itself may cause infections.
3. Endogenous infections may occur very rarely through blood e.g., gonococcal and meningococcal infections.

PATHOLOGY

Pathological changes of bacterial conjunctivitis consist of:

1. Vascular response. It is characterised by congestion and increased permeability of the conjunctival vessels associated with proliferation of capillaries.
2. Cellular response. It is in the form of exudation of polymorphonuclear cells and other inflammatory cells into the substantia propria of conjunctiva as well as in the conjunctival sac.
3. Conjunctival tissue response. Conjunctiva becomes oedematous. The superficial epithelial cells degenerate, become loose and evanescent. There occurs proliferation of basal layers of conjunctival epithelium and increase in the number of mucin secreting goblet cells.
4. Conjunctival discharge. It consists of tears, mucus, inflammatory cells, desquamated epithelial cells, fibrin and bacteria. If the inflammation is very severe, diapedesis of red blood cells may occur and discharge may become blood stained. Severity of pathological changes varies depending upon the severity of inflammation and the causative organism. The changes are thus more marked in purulent conjunctivitis than mucopurulent conjunctivitis.

CLINICAL FEATURES:

Red eye, swelling of the conjunctiva, and watering of the eyes are symptoms common to all forms of conjunctivitis. However, the pupils should be normally reactive, and the visual acuity normal.

Conjunctivitis is identified by inflammation of the conjunctiva, manifested by irritation and redness. Examination using a slit lamp (biomicroscope) may improve diagnostic accuracy. Examination of the palpebral conjunctiva, that overlying the inner aspects of the eyelids, is usually more diagnostic than examination of the bulbar conjunctiva, that overlying the sclera.

Viral: Viral conjunctivitis manifests as a fine, diffuse pinkness of the conjunctiva which may be mistaken for iritis, but corroborative signs on microscopy, particularly numerous lymphoid follicles on the tarsal conjunctiva, and sometimes a punctate keratitis are seen.

Allergic: Allergic conjunctivitis is inflammation of the conjunctiva due to allergy. The specific allergens may differ among patients. Symptoms result from the release of histamine and other active substances by mast cells, and consist of redness (mainly due to vasodilation of the peripheral small blood vessels), swelling of the conjunctiva, itching, and increased production of tears.

Bacterial: Bacterial conjunctivitis causes the rapid onset of conjunctival redness, swelling of the eyelid, and a sticky discharge. Typically, symptoms develop first in one eye, but may spread to the other eye within 2–5 days. Conjunctivitis due to common pus-producing bacteria causes marked grittiness or irritation and a stringy, opaque, greyish or yellowish discharge that may cause the lids to stick together, especially after sleep. Severe crusting of the infected eye and the surrounding skin may also occur. The gritty or scratchy feeling is sometimes localized enough that patients may insist that they have a foreign body in the eye.

Chemical: Chemical eye injury may result when an acidic or alkaline substance gets in the eye. Alkali burns are typically worse than acidic burns. Mild burns produce conjunctivitis, while more severe burns may cause the cornea to turn white. Irritant or toxic conjunctivitis is primarily marked by redness. If due to a chemical splash, it is often present in only the lower conjunctival sac. With some chemicals, above all with caustic alkalis such as sodium hydroxide, necrosis of the conjunctiva marked by a deceptively white eye due to vascular closure may occur, followed by sloughing off of the dead epithelium. A slit lamp examination is likely to show evidence of anterior uveitis.

DIAGNOSIS

A Labs and cultures are rarely indicated to confirm the diagnosis of conjunctivitis. Eyelid cultures and cytology are usually reserved for cases of recurrent conjunctivitis, those resistant to treatment, suspected gonococcal or chlamydial infection, suspected infectious neonatal conjunctivitis, and adults presenting with severe purulent discharge. Rapid antigen testing is available for adenoviruses and can be used to confirm suspected viral causes of conjunctivitis to prevent unnecessary antibiotic use. One study comparing rapid antigen testing to PCR and viral culture and confirmatory immunofluorescent staining found rapid antigen testing to have a sensitivity of 89% and a specificity of up to 94%.

Imaging studies do not play an important role in the workup of conjunctivitis unless an underlying pathology is suspected. For instance, MRA, CT scan, and orbital Doppler may play a role in the case of a cavernous sinus fistula. In addition, an orbital CT scan may help rule out an orbital abscess when the conjunctivitis is coexistent with orbital cellulitis.

Certain procedures could help manage a known or suspected underlying cause of conjunctivitis. Removal of offending lashes may be required in trichiasis. Nasolacrimal duct irrigation could be attempted to relieve an obstruction that predisposes to infection. In the case of a foreign body, the eversion of the eyelid at the slit lamp is indicated.

Conjunctival scrapings can be done with a topical anesthetic. This should be preceded by antibiotic therapy. Gram stain is useful in identifying bacterial characteristics. Giemsa stain is used to screen for Chlamydia. Cultures may be completed for viral and bacterial agents. A fungal culture is generally not needed except in the case of a corneal ulcer or known contamination of a contact lens solution, such as observed in the epidemic of early 2006. Additionally, the type of inflammatory reaction defines the cellular response. Lymphocytes will predominate in viral infections, eosinophils in allergic reactions, and neutrophils in bacterial infections.

In cases of viral conjunctivitis, viral isolation methods may help in establishing the diagnosis of acute follicular conjunctivitis; however, they are not indicated in chronic conjunctivitis. Enzyme-linked immunosorbent assay (ELISA) and direct immunofluorescence monoclonal antibody staining are rapid and widely available detection methods.

In allergic conjunctivitis, superficial scrapings may help to diagnose by revealing eosinophils in the most severe cases because eosinophils are only present in the deeper layers of the conjunctiva. Therefore, an absence of eosinophils on conjunctival scrapings does not rule out the possibility of allergic conjunctivitis.

Many investigators have described the measurement of various inflammatory mediators in tears, such as IgE, tryptase, and histamine, as indicators of allergic response. In addition, skin testing may provide a definitive diagnosis and is highly practical and readily available.

MANAGEMENT

Avoidance of the allergens is the main stay of treatment for many forms of allergies including allergic conjunctivitis. Artificial tears provide a barrier function, dilute various allergens, and flush the ocular surface clean from many inflammatory mediators.

The treatment options for allergic conjunctivitis include lubricating eye drops, anti-histamines, and mast cell stabilizers. Many studies have demonstrated the superiority of topical antihistamines and mast cell stabilizers compared to placebo in alleviating the symptoms of allergic conjunctivitis; in addition, it has been demonstrated that antihistamines are more beneficial than mast cell stabilizers for providing short-term relief.

Oral antihistamines are commonly used for alleviating the ocular symptoms in patients with allergic conjunctivitis.. Unfortunately, oral antihistamines induce ocular drying, which can significantly worsen the symptoms of allergic conjunctivitis.

Steroids should be used judiciously and only in selected cases. Topical and oral administration, in addition to supratarsal injections are often required if the condition is severe; unfortunately, any route of corticosteroid administration is associated with formation of cataracts and elevated intraocular pressure.

Allergen-specific immunotherapy, which has gained popularity in the recent years, works by inducing clinical tolerance to a specific allergen. This appears to be an effective treatment options for those with allergic rhinoconjunctivitis who demonstrate specific IgE antibodies.

PREVENTION

The most effective prevention is good hygiene, especially avoiding rubbing the eyes with infected hand.

BELLADONNA AND CONJUNCTIVITIS

Indications of Belladonna: Eyes red, glistening and sparkling; wild and unsteady look; face red, hot, and swollen. Congestion of Blood around the eyes, brilliant red blood vessels, contracted pupils, and severe photophobia.

Acute conjunctivitis with pressing pains like the eyes were full of sand, and tearing pains like the eye would be pulled from the socket. Dilated pupils and insensibility.

A scorching dryness followed by an uncontrollable lachrymation, pressing type of pain, and severe photophobia. With cerebral congestion, there is hyperemia of the retina and optic nerve.

Pupils are dilated. Eyes sparkling, prominent, staring. Red conjunctiva. Fiery, red, vivid hallucination, even on closing the eyes. Blindness attacks are followed by yellow vision. Has eyesight flashes of red. Photophobia. Triplopia and Diplopia. Moonlight blindness. Sensation as if one's eyes were partially closed. Eyelids feel achy, puffy, and clogged. Exophthalmos. Lacrimation tastes salty. When reading, lines appear to be crooked.

Eye throbs very deep while lying down. Dilated pupils. Conjunctiva red; dry; burning; photophobia; shooting in eyes. Eyes seem bloated and projecting, gazing, and brilliant. Illusions of the eyes; appearance of fire. Squinting and lid spasms. Swollen eyelids. Fundus is clogged.

ESSENTIAL OF CASE TAKING

- Preliminary data
- Chief complaint – Location, Sensation, Modality, Concomitant (Complete Symptoms).
- Past History
- Family History
- Physical General
- Mental Generals
- Physical Examinations
- Systemic Examination
- Totality of Symptoms
- Medicine Prescribed

A CASE STUDY

Preliminary Data:

Name: Mr. JJP		Date: 10/07/2023
Age: 26 Years	Sex: Male	Religion: Hindu
Marital status: Married		Income: Middle class
Occupation: Student		Diet: Veg
Address: Vadodara, Gujarat, India		

Chief complaints:

No.	Complaints with duration	Location & Extension	Sensation & Pathology	Modalities	Concomitants
1.	c/o Burning in eyes with lachrymation since 2 days	Eyes (B/L)	Burning in both eyes Lachrymation++ Redness+++ Itching of both eye+ Puffiness of eyelids	Burning < light Lachrymation < sun heat Itching < Night	Heaviness of forehead
2.	c/o Itching +++ in both eyes				

HISTORY OF PRESENT ILLNESS

A 26 Years old Male patient came with the complain of Pain in eyes with burning, redness, lachrymation and itching since 2 days, complains becomes worst by light, sun heat and at night.

Past history:

Dengue fever before 3 years
Jaundice before 2 years

Family history:

Mother: Alive and Healthy
Father: Alive and Healthy
Grand Mother: DM-2 since 7 years

Physical generals:

Appetite: Adequate (3 times/day)
Desire: Not specific

Aversion: Not specific
Thirst: 6 to 7 glasses/day
Urine: 7-8 times/day
Stool: once/day
Perspiration: All over body after exertion
Sleep: Easily awakes on slightest noise
Dreams: Not remember
Thermal: Chilly

Mental generals:

Irritable++
Angry at little matter
Restless

Physical examination:

General Examination:
Level of Consciousness: Conscious and oriented
Intelligence level: Good
Nutritional level: well- nourished
Weight: 56 kg
Nails: Pink
Tongue: Moist Pink

Height: 5'7"

Conjunctiva: Redness of both conjunctiva, puffiness of eyelids, Lachrymation

Vitals: Pulse rate: 80/min

Blood Pressure: 124/78 mm of hg

Respiratory rate: 18-20/min

SPO2 level: 99%

Temperature: 98.6 F

Systemic examination:

Respiratory system: Air Entry Bilateral Equal

Gastrointestinal Tract: P/A soft

Central Nervous System: Conscious and oriented

Cardio Vascular System: S1S2 heard

Genito Urinary System: Nothing abnormal detected

Locomotor system: Nothing abnormal detected

TOTALITY OF SYMPTOMS

Irritable

Restless

Sleep- easily awakes on slightest noise

Heaviness of forehead

Burning pain <light

Lachrymation <light

Itching <night

Puffiness of both eyes

Redness of eyes

Prescription: (Non Reportorial Approach)

7/6/2022

Rx, 1] Belladonna 30 C 4-0-4-0 for 2 days

2] Rubrum 4-0-4-0 for 2 days

FOLLOW UP:

Date	Symptoms	Prescription
12/07/2023	1.Itching reduced 2.Redness as it is 3.Lachrymation reduced 4.Burning Reduced	1.Belladonna 30 4-0-4-0 for 3 days 2.Rubrum 4-0-4-0 for 3 days
16/07/2023	1.Itching occasionally 2.Mild redness in both eyes 3.Lachrymation reduced 4.No burning	1.Belladonna 200 1 dose 2.Rubrum 4-0-4-0 for 3 days
20/07/2023	1.No Itching 2.No lachrymation 3.Mild Redness in both eyes 4.No burning	1.Rubrum 4-0-4-0 for 7 days

CONCLUSION

Belladonna is useful medicine in many acute diseases when indicated and it is helpful in recovering patient having acute conjunctivitis of viral or allergic in origin and prevents further complications.

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