



Ayurveda Management in Prodromal Ocular Manifestations: Case Series - A Solution to Antimicrobial Resistance

Shantala Priyadarshini^{1*}, Sushma³ and Pooja²

¹Ayush Chair, University of Latvia, Deputed by Ayush Ministry, India

²Post Graduate Scholar, SDM Hassan, India

³Research Scholar, Dr. Vijayas Ayurveda Research and Therapy Center, Mysore, India

*Corresponding Author: Shantala Priyadarshini, Ayush Chair, University of Latvia, Deputed by Ayush Ministry, India.

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Abstract

Background: Antimicrobial Resistance (AMR) has been declared by WHO as one of the top 10 global health threats facing humanity and it becomes pertinent to find solutions to combat it. Drug resistant pathogens become rampant due to overuse or misuse of antimicrobials. Ayurveda has solutions for this above issue to prevent the use of antimicrobials. Conjunctivitis could manifest due to viral or bacterial or allergic etiology but Ayurveda always considered methods to enhance immunity to control these conditions in early stages.

Starting early management in the prodromal stage described in Ayurveda, facilitates quick, inexpensive management and could be a solution to prevent prescribing antimicrobials.

Methods and Assessment: Done with photos and teleconsultation in prodromal stage. Cases manifesting prodromal symptoms shared photos morning and evening.

Questions recorded in detail confirmed prodromal symptoms, reduction or aggravation of symptoms was ensured.

Results and Conclusion: Simple lifestyle, diet and Bidalaka (topical application) were suggested. More than 9 cases were recorded, significant results recorded in 3 to 4 days, nearly 6 cases responded only with the above. And 3 more cases prescribed oral consumption of Amruthasatwa 125 mg mixed with honey thrice a day. All symptoms cleared up in 4 to 5 days and usually without Ayurveda treatment it persists for 12 to 15 days.

Management during prodromal stages ensures better outcomes.

Keywords: Microbial Resistance; Prodromal Symptoms; Ocular Drug Delivery; Purvarupa; Amrutha

Introduction

Ayurveda provides holistic solutions starting from preventive lifestyle to immunity enhancing rasayanas. Management during prodromal conditions to later stages has been precisely prescribed and following it surely can minimize or stop the use of resistant

antimicrobials. Ocular manifestations if neglected can lead to grave visual problems so understanding prodromal symptoms and managing them early is sure way to better management [1].

Understanding and starting treatment in prodromal stage can surely help prevent prescribing antimicrobials. World antimicrobial

awareness week (WAAW) is celebrated (18th to 24th November) and is imperative as resistance to bacteria, viruses, fungi and parasites is a challenging situation demanding solutions. So here we have discussed the simple management of prodromal symptoms and if neglected could lead to serious ocular manifestations [2].

Prodromal symptoms of conjunctivitis described in Sushruta samhita [3] (Table 1).

Sanskrit	Translation
Avila	Turbid/filled with tears
Samrambha	Mild inflammation
Ashru	Lacrimation
Kandu	Itching
Upadeha	Sticky secretion
Guru	Heaviness
Usha	Heat
Toda	Pricking pain
Raga	Redness
Vartma kosheshu shula	Pain in eyelids
Shukapurnabham	Gritty -sand filled feeling
Vihanyamana rupa	Disturbed vision
Kriyasu Akshi Klama	Fatigue on blinking

Table 1: Prodromal symptoms.

Symptoms in least intensity or few symptoms are described as a prodromal stage in conjunctivitis recognised as “Abhishyandha”. Treatment has been elaborately described for all stages and types of conjunctivitis and as pathology can penetrate into deeper tissues. It could lead to serious eye conditions [4,5].

Management in early stage-prodromal stage is always better [6].

Ayurveda advises various types of fasting and bidalaka in prodromal stages of ocular manifestation [7].

Bidalaka is a special topical application made up of lipophilic and hydrophilic drugs so the palpebral conjunctiva, which is a highly vascular mucous membrane, gets the penetration of the medications. This mode of drug delivery into the eye was dealt in ‘kriyakalpa’ -Kriya is action and Kalpa is creativity to design and it includes formulations for all stages [8].

Today ophthalmic transdermal drug delivery seems still in infancy and Ayurveda can provide leads for it to get better tissue absorption into deeper chambers. Tissue target time, penetration, absorption have all been considered [9,10].

Methods

Patients were advised to take photos morning and evening and share daily details of appetite, bowel status, sleep, symptoms and report any new symptom.

Redness, mild inflammation, itching - ocular manifestation with low appetite, disturbed digestive system (either constipation or loose motion) reported, no fatigue or raise in temperature not any other symptom was reported.

Was suggested -easy to digest food like kichadi or gruel. Sipping hot water, avoid day sleep, no screen time and also to avoid physical and mental exertion.

Patient noticed a reduction in redness and inflammation by evening and felt much better with noticeable change in redness and mild swelling.

Patient and family are ardent followers of Ayurveda so it was easy to get results in less than two days. Patients siblings and husband also had similar symptoms and got quick results following the same suggestions.

Case 01 (two more cases very similar in same family)

Patient and family who are on regular Ayurveda for all conditions reported in prodromal stage and were given tele consultation and were advised to share photos every six hours and more often if symptoms aggravated. Usually followed diet and lifestyle suggested and sent photos and details twice a day, None of them were on any daily medication.

Family members -siblings and two more adults had similar symptoms so only one case has been reported with photos. All three cases recovered within 72 to 96 hours so no topical or oral medication was advised. Lifestyle suggestions included fasting or to be on a very light diet, to avoid day sleep and screen time. Patients were advised to increase simple pranayama thrice a day as they were doing pranayama once a day.

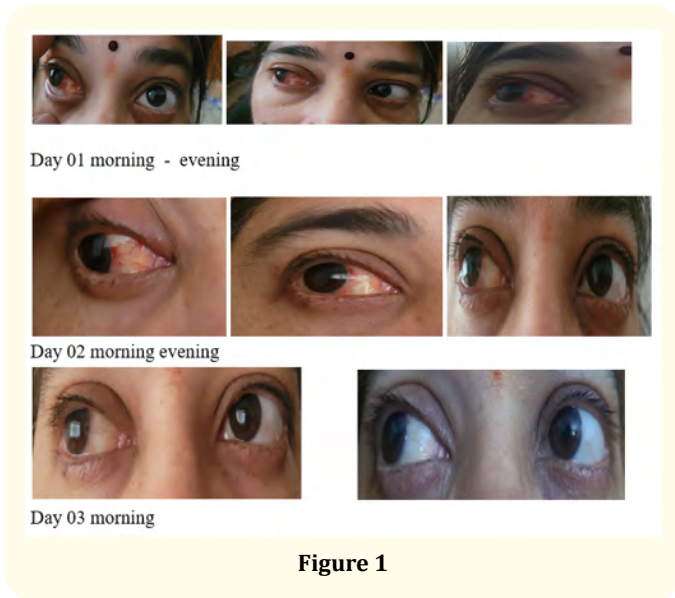


Figure 1

Case 02 (daughter and mother)

Only lifestyle and diet -oral medication

Almost similar symptoms as above -both mother (Ayurveda Vaidya) and daughter. Mother was on fasting for 24 hours and daughter was on fasting for 12 hours and was advised amrutha satwa 250 mg thrice a day mixed with honey. All symptoms were gone in 48-60 hours-photos shared.



Figure 2

Case 03

Oral medication - Amrutha satwa 250 mg thrice a day mixed with honey.

Bidalaka-kayastha bidalaka Ca. Cik. 26/231- 234.

Even after 40 hours not much improvement was noticed so Bidalaka was advised. Patient had Kayastha at home and was advised to rub it to make a paste by rubbing on sandal stone(special stone used to make sandal paste) and apply a very thin paste on

closed eyelids. And was advised to wash off after 20 minutes, repeat it thrice a day. By 72 hours we could see redness reducing and the patient felt much better. By the end of 96 hours almost all symptoms reduced but topical application was continued for next 24 hours and all symptoms vanished.

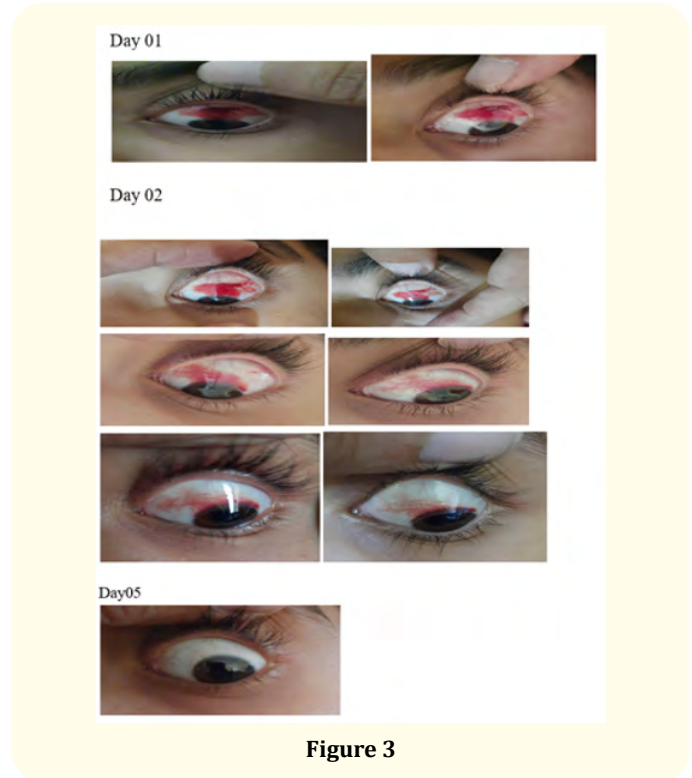


Figure 3

Results and Discussion

Understanding that management in the prodromal stage as vociferously stated in Ayurveda is the best way to control many conditions from getting into the acute stage. Ayurveda has a branch shalakya where in infants to adults and different conditions are treated with promising results [11,12].

Immunity shall be enhanced by fasting and has an impact on immunity markers [13] Amrutha satwa orally has been said to have antimicrobial effect, antitoxic effect, immunomodulatory effect, antioxidant activity, eye conditions [14] Ayurveda has -Nidana parivarjan (avoid causative factors) Purva rupa chikitsa (management of prodromal stage), Rasayana (immunomodulators) suitable aspects of Yoga to get faster, safer and inexpensive management and is a solution to avoid antimicrobial use.

Drug delivery to ophthalmic tissues has been of prime importance from time immemorial and today drug delivery to retinal tissues is also in vogue [15].

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