



Prevalence of Conjunctivitis in Patients Referred to Tertiary Eye Hospital, Raipur

Divya Sharma^{1*} and Varaprasad Kolla²

¹Department of Optometry, Shri Rawatpura Sarkar University, Raipur, India

²Department of Science, ITM University, Raipur, India

Abstract

The study aims to investigate the prevalence of conjunctivitis in patients who referred to tertiary eye hospital Raipur. This was a prospective cross-sectional observational community-based study involving 150 patients from Shri Ganesh Vinayak Eye Hospital, Raipur. Total number of subjects with conjunctivitis screened was 150. Out of 150 subjects 62 were children. The cases of conjunctivitis further categorized based on etiology prevalence of allergic conjunctivitis were 94 (62.66%), prevalence of viral conjunctivitis was 36 (24%), and prevalence of bacterial conjunctivitis was 20 (13.33%). The present study highlights that the allergic conjunctivitis has a high among the people age is lacking amongst the affected populations. The sign, symptoms and consideration of the background of conjunctivitis as well as the therapeutic procedures should be assessed.

Keywords: Conjunctivitis; Allergic; Bacterial; Viral; Redness; Symptom; Diagnosis; Treatment; Prevalence

Introduction

Conjunctivitis, or pink eye, is an irritation or inflammation of the conjunctiva, which covers the white part of the eyeball. It can be caused by allergies or a bacterial or viral infection. Conjunctivitis can be extremely contagious and is spread by contact with eye secretions from anyone who is infected [1].

Symptoms include redness, itching and tearing of the eyes. It can also lead to discharge or crusting around the eyes.

It's important to stop wearing contact lenses whilst affected by conjunctivitis. It often resolves on its own, but treatment can speed the recovery process. Allergic conjunctivitis can be treated with antihistamines. Bacterial conjunctivitis can be treated with antibiotic eye drops [2].

Materials and Methods

Participants

This was a prospective cross-sectional observational community-based study involving 150 peoples from Shri Ganesh Vinayak Eye Hospital, Raipur or 3 basic schools participate in the study. The duration of the study was from August 2018 to March 2019.

After history taking, subjects underwent a test; visual acuity, objective refraction, anterior and posterior segments examination with a slit-lamp and a direct ophthalmoscope respectively [3].

Participants

This was a prospective cross-sectional observational community-based study involving 150 peoples from Shri Ganesh Vinayak Eye Hospital, Raipur or 3 basic schools participate in the study. The duration of the study was from August 2018 to March 2019.

Inclusion criteria:

- Babies (0-2 years): Common
- Toddlers (3-5 years): Common
- Children (6-13 years): Common
- Teenagers (14-18): Common
- Young adults (19-40 years): Very common

- Adults (41-60): Common
- Seniors (60+): Common
- Discharge (mucous or purulent)
- Hyperemia
- Chemosis
- Watering
- Photophobia
- Pain
- Irritation

Exclusion criteria:

- Age older than 75 years
- Pre-existing symptoms for longer than 7 days
- Use of systemic or local antibiotics within the previous two weeks
- Keratitis
- Recent loss of vision
- Eye trauma

Results

Data collection and statistical analysis

Total number of subjects with conjunctivitis screened were 150. The selected sample had children in the age group of 1-15 years, teenagers

*Corresponding author: Divya Sharma, Department of Optometry, Assistant Professor, Shri Rawatpura Sarkar University, Raipur, India, E-mail: sru.optmdivya@gmail.com

Received February 19, 2021; Accepted March 05, 2021; Published March 12, 2021

Citation: Sharma D, Kolla V (2021) Prevalence of Conjunctivitis in Patients referred to Tertiary Eye Hospital, Raipur. Optom Open Access 6: 1-4.

Copyright: © 2021 Sharma D, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

in 16-25 years, adults in 26-50 years, and elders was 50-75 years. Out of the 150 subjects 62 were children. The cases of conjunctivitis further categorized based on etiology prevalence of allergy conjunctivitis was 62.66% and bacterial conjunctivitis was 24%. Prevalence of viral conjunctivitis was 13.33%. People with symptoms of conjunctivitis for the first time was 55.33%. Percentage of males affected by conjunctivitis was 54.66%. Percentage of females affected by conjunctivitis was 45.33%. Dust (35%) was the most common precipitating factor. The young group had higher prevalence of diagnosed allergic conjunctivitis. Sensitization to mites, food, and pollen was associated with higher prevalence of allergic conditions. Over 95% of patients were given a topical treatment as shown in Tables 1 and 2.

S. No.	Category	Age group	No. of patients	Percentage
1	Children	1-15	62	41.33%
2	Teenagers	16-25	35	23.33%
3	Adults	26-50	39	26%
4	Elders	50-75	14	9.33%
5	Male	1-80	82	54.66%
6	Female	1-65	68	45.33%
7	Allergic conjunctivitis	1-30	94	62.66%
8	Viral conjunctivitis	1-50	36	24%
9	Bacterial conjunctivitis	25-60	20	13.33%

Table 1: Age and gender distribution of participants (n=150).

Symptoms	Frequency (%)
Clear Mucinous Discharge	17.9%
Photophobia	26.7%
Tearing	53.3%
Grittiness	61.5%
Ropy/Stringy/Mucinous Discharge	64.3%
Redness	77.2%
Itching	100%

Table 2: Distribution of major symptoms and signs of Conjunctivitis.

Discussion

This study emphasized that the prevalence among the conjunctivitis in hospital patients setting than community-based ones [4]. Therefore, the current community-based cross-sectional study had the purpose of determining the prevalence of conjunctivitis among the patients in Shri Ganesh Vinayak Eye Hospital, Raipur. The prevalence of allergic conjunctivitis was found (62.66%) out of 150 patients. However, this is somewhat higher when compared to previous hospital-based studies except Rukas-Kivioja [5], who found the prevalence of allergy conjunctivitis to be (62%). Meanwhile, in their community-based studies among school found the prevalence of allergic conjunctivitis to be 12.1% and 7.3% respectively. The higher prevalence of allergic conjunctivitis in the study is probably because of its timing in dry season (November to March) where there is usually dust and pollen in the air [6] (Figures 1 and 2).

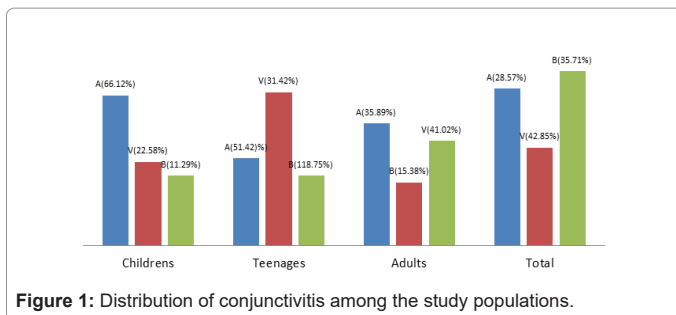


Figure 1: Distribution of conjunctivitis among the study populations.

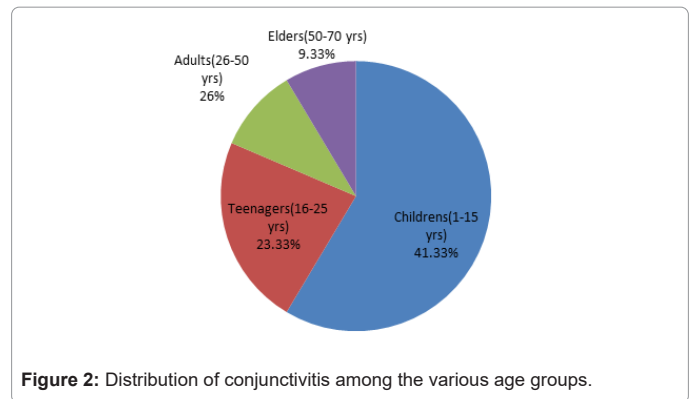


Figure 2: Distribution of conjunctivitis among the various age groups.

The term of viral conjunctivitis is an inclusive term that encompasses different clinical entities based on the assumption. The prevalence of viral conjunctivitis was found (24%) out of 150 patients [7]. Epidemiology studies have confirmed exposures to particulate matter (air pollutants) as contribution to viral conjunctivitis, more so when the conjunctiva is in direct contact with the atmosphere [8].

Bacterial or viral conjunctivitis although self-limiting, has a stigma attached to it: those affected with “pink eye” are barred from contact with others. The prevalence of viral conjunctivitis was found (13.33%) out of 150 patients [9]. In 2007 study published by Patel and colleagues demonstrating a similar incidence and same causative organisms in bacterial conjunctivitis. Looking at 111 patients seen in the emergency department, the study determined that 78% of cases were of bacteria identified were influenza, pneumoniae and aureus [10].

Conclusion

Conjunctivitis has a high prevalence among people of all ages. Identification of patients and their appropriate treatment is important to improve the ophthalmic health of the community. Current management goals of conjunctivitis aim to minimize the inflammatory cascade associated with allergic response in the initial stages of the pathological mechanism.

Acknowledgement

The author is very grateful to the former head of the science department. The author would like to acknowledge the participant for their patience.

References

1. Facts about Pink Eye. National Eye Institute (2015).
2. Sheikh A, Hurwitz B, van Schayck CP, McLean S, Nurmatov U (2012) Antibiotics versus placebo for acute bacterial conjunctivitis. *Cochrane Database Syst Rev* 2012:CD001211.
3. Bacterial Conjunctivitis. Guideline 12, DOG/BVA Guidelines (2011).
4. Rigoli L, Briuglia S, Caimmi S, Ferrau V, Gallizzi R, et al (2011) Gene-environment interactions in childhood asthma. *Int J Immunopathol Pharmacol* 24:41-47.
5. Leonardi S, Miraglia Del Giudice M, La Rosa M, Bellanti JA (2007) Atopic disease, immune system, and the environment. *Allergy Asthma Proc* 28:410-417.
6. Bielory L, Friedlaender MH (2008) Allergic conjunctivitis. *Immunol Allergy Clin North Am* 28:43-58.
7. Liu G, Keane-Myers A, Miyazaki D, Tai A, Ono SJ (1999) Molecular and cellular aspects of allergic conjunctivitis. *Chem Immunol* 73:39-58.

8. Okesola AO, Salako AO (2010) Microbiological profile of bacterial conjunctivitis in Ibadan, Nigeria. *Ann Ib Postgrad Med* 8:20–24.
9. Schneider JE, Scheibling CM, Segall D, Sambursky R, Ohsfeldt RL et al. (2013) Epidemiology and Economic Burden of Conjunctivitis: A Managed Care Perspective. *Journal of Managed Care Medicine* 17: 78-83.
10. Tabbara KF (1996) *Infections of the Eye*. (Subsequent edn), Tabbara KF, Hyndiuk RA, (ed). Little Brown and Company, USA: 433-453.