

Conjunctivitis Patients in the Ophthalmology Outpatient Clinic Dr. Soetomo General Academic Hospital, Surabaya, in 2017

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ABSTRACT

Introduction: Conjunctivitis is a self-limiting disease. It can be diagnosed through clinical signs found in the eye examination. The purpose of this study was to define the characteristics of conjunctivitis patients in the ophthalmology outpatient clinic Dr. Soetomo General Academic Hospital, Surabaya, in 2017.

Methods: This was a retrospective descriptive observational study of all conjunctivitis patients from the medical history in the ophthalmology outpatient clinic Dr. Soetomo General Academic Hospital, Surabaya, in 2017.

Results: There were 497 patients included in this study. Most patients with conjunctivitis were 0-9 years old (19.32%). The most common sign of conjunctivitis was conjunctival hyperemia (80.89%), followed by eye discharge (24.14%), eyelid edema (8.05%), blepharospasm (5.63%), and papillary hypertrophy (5.03%). Most cases of conjunctivitis were bilateral (58.75%).

Conclusion: The majority of conjunctivitis was bilateral conjunctivitis. It commonly affects children under ten years old. The most typical finding was conjunctival hyperemia.

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Introduction

Conjunctiva is a membrane that is highly exposed to the environment causing it to be susceptible to infection.^{1,2} It protects the eye from harmful environmental agents, lubricates the eye, and has its role in the immune balance of the eye.³ Conjunctivitis is known to be the most common eye disease in the world.^{2,4} In the United States, acute conjunctivitis affects 6 million people yearly.⁵ Furthermore, in 2010, conjunctivitis was among the top 10 outpatient diagnoses in Indonesian hospitals.⁶ However, epidemiological data regarding the number of conjunctivitis patients in Surabaya has not been studied yet.

Conjunctivitis is an inflammation of the conjunctiva and is known to be the main cause of red eye. It is characterized by vasodilatation, causing conjunctival hyperemia and edema.^{7,8} Diagnosis of conjunctivitis can be determined by the history and clinical examination. Only in some cases additional diagnostic test is needed.⁹

Early detection of conjunctivitis is important because it is often contagious, although it is generally a self-limiting disease lasting 10-14 days. Furthermore, intraocular and extraocular complications of conjunctivitis, such as keratitis, uveitis, blepharitis, corneal ulcer, entropion, and cicatrix, often found in the patients make them unable to perform daily activities. Conjunctivitis can also be the cause of blindness.⁹⁻¹²

The predisposing factors include age, hygiene, sanitation, allergens, and the use of contact lenses.^{9,13} Proper hygiene and sanitation can prevent the spread of conjunctivitis as it is highly transmissible.¹⁴ This study aimed to determine the characteristics of conjunctivitis patients based on age, clinical signs, and laterality in the ophthalmology outpatient clinic Dr. Soetomo General Academic Hospital, Surabaya, in 2017.

Methods

This was a descriptive retrospective observational study of all conjunctivitis patients in the ophthalmology outpatient clinic Dr. Soetomo General Academic Hospital, Surabaya, in 2017. The population of this study was all patients in the ophthalmology outpatient clinic Dr. Soetomo General Academic Hospital, Surabaya, in 2017. In total, there were 497 patients included in this study. Initially, 686 patients were found in the medical history in the ophthalmology outpatient clinic Dr. Soetomo General Academic Hospital, Surabaya, during the period of January to December 2017. Nevertheless, 189 patients were excluded due to incomplete data. The data for this study was obtained from the medical history and presented in table form. This study had obtained ethical approval by Ethical Committee for Health Research Dr. Soetomo General Academic Hospital, Surabaya.

Results

During the study period, from January to December 2017, a total of 497 patients were diagnosed with conjunctivitis.

Table 1. Characteristics of patients with conjunctivitis

Variable	Frequency	Percentage
Age Group		
0-9 years old	96	19.32%
10-19 years old	70	14.08%
20-29 years old	61	12.27%
30-39 years old	55	11.07%
40-49 years old	35	7.04%
50-59 years old	59	11.87%
60-69 years old	66	13.28%
70-79 years old	36	7.24%
≥80 years old	19	3.82%
Clinical Sign		
Conjunctival hyperemia	402	80.89%
Eye discharge	120	24.14 %
Eyelid edema	40	8.05%
Blepharospasm	28	5.63%
Papillary hypertrophy	25	5.03%
Follicular hypertrophy	13	2.62%
Eyelid crust or squama	7	1.41%
Cobblestone	4	0.80%
Flicten	1	0.20%
Chemosis	1	0.20%
Membrane	1	0.20%
Laterality		
Bilateral	292	58.75%
Unilateral	205	41.25%

Source: Research data, processed

Table 1 shows that conjunctivitis mostly occurred in children aged 0-9 years old (19.32%), followed by 10-19 years (14.08%). The five most common signs of conjunctivitis were conjunctival hyperemia (80.89%), followed by eye discharge (24.14%), eyelid edema (8.05%), blepharospasm (5.63%), and papillary hypertrophy (5.03%). Bilateral conjunctivitis (58.75%) was more frequent than unilateral conjunctivitis (41.25%).

Discussion

In this study, the results showed that conjunctivitis mostly occurred in children aged 0-9 years old. This result is different from a study conducted at Bali Mandara Eye Hospital Denpasar where the domination was in the age group of 31-40 years old.¹⁵ A study at Dr. Pirngadi Regional General Hospital Medan found that 21-30 years old was the most frequent cases of conjunctivitis.¹⁶ A different result also happened at Raden Matta Her Hospital Jambi where the highest number of conjunctivitis occurred in the age group of 12-17 years old.¹⁷ However, the study of Asadollah *et al.*, (2016) showed conjunctivitis was more often met in patients below 16 years old.¹⁸

Conjunctivitis can occur in all ages of life.² Bacterial conjunctivitis contributes up to 50% of all cases of conjunctivitis in adults and 70-80% in children.¹⁹ It usually affects one eye and easily spreads to the other eye through contaminated hands or things. It may show that hygiene has a role in the incidence of conjunctivitis.^{2,12}

The most frequent signs found in the eye examination in this study were conjunctival hyperemia and eye discharge. Studies conducted at Bali Mandara Eye Hospital Denpasar, Dr. Pirngadi Regional General Hospital Medan, and Raden Matta Her Hospital Jambi showed a similar result where the conjunctival hyperemia was the most common sign of conjunctivitis.^{15,17} Conjunctival hyperemia and eye discharge are in accordance with the characteristics of conjunctivitis.⁷

Studies conducted at Bali Mandara Eye Hospital Denpasar and Dr. Pirngadi Regional General Hospital Medan were in line with this study, where the number of patients with bilateral conjunctivitis was more than the unilateral.^{15,16} Conjunctivitis can occur both in unilateral and bilateral. Nevertheless, the potential for conjunctivitis to spread is high.^{9,12} The main cause is the contaminated hands due to the close distance between two eyes.^{10,20}

Strength and Limitations

The limitation of this study was the number of cases only represented Dr. Soetomo General Academic Hospital, Surabaya, despite general population. Moreover, this study did not assess other ocular condition that might coincidence to conjunctivitis. Despite the limitation, there was only a few studies of conjunctivitis profile. Hence, this study could help people to have a better understanding on the characteristics of conjunctivitis.

Conclusion

Conjunctivitis commonly affects both sides of the eye of children below ten years old. The five most common signs of conjunctivitis were conjunctival hyperemia, eye discharge, eyelid edema, blepharospasm, and papillary hypertrophy.

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Conflict of Interest

The authors declared there is no conflict of interest.

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Ethical Clearance

This study had received ethical clearance from Ethical Committee for Health Research Dr. Soetomo General Academic Hospital, Surabaya (no. 0040/KEPK/II/2018) on 15 February 2018.

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