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Editorial

Recent incidence of infectious conjunctivitis in Bangladesh: Are we aware?

A B S T R A C T

Bangladesh has seen a recent surge of infectious conjunctivitis nationwide for the last few weeks. Reported by journalists of daily newspapers, the incidence is now 33.33% in some eye outpatient departments (OPDs) of the country, which is surprisingly higher than the usual expected rate of the disease. In some districts, educational institutions have been shut down and it is greatly hampering the daily life of the citizens. Though the causative agent of the infection is yet unknown, the higher disease notification rate solicits rapid epidemiological studies and microbial assessment. Also, Bangladesh should be more aware in its hygiene practice and take adequate measures to halt the transmission of the disease to its South Asian neighbouring countries.

1. Introduction

Acute conjunctivitis accounts for up to 2% of outpatient primary care and 1% of emergency room visits worldwide [1]. Compared to temperate regions of the globe, tropical nations have a greater frequency of infectious eye disorders due to climatic variables such as low humidity, dust, sunshine, and rainfall [2]. As one of the most populated tropical nations in South Asia, Bangladesh has a greater frequency of infectious eye disorders than many would anticipate. Apart from that, environmental antigens and climatic factors also contribute to the increased occurrence of the inflammatory conditions of the eye here, which is especially true with seasonal allergic conjunctivitis, which is more common in the spring and summer [3–5].

The previous two weeks have seen an alarmingly increasing frequency of conjunctivitis, according to Bangladesh's daily newspapers [6–10]. According to ophthalmologists who spoke to journalists, the incidence of conjunctivitis in the out-patient department (OPD) of Chattogram Medical College Hospital was an average of 100 per 300 patients (33.33%) on September 13, 2022, according to leading daily national newspapers [7]. The disease incidence initiated in Chattogram, the second most populous district in Bangladesh [7,8]. After that, Dhaka, the capital and most populous city of Bangladesh, also has seen an upsurge in conjunctivitis cases [9,10].

2. Previous & present epidemiological data

Jabber et al. (2021) did cross-sectional research on the pattern of eye disorders at Dhaka city district level and rural regions in Bangladesh, despite the lack of epidemiological data on the overall frequency of conjunctivitis in that country [3]. Unfortunately, the prevalence of conjunctivitis was not reported individually in the research. However, in a previous study by Sutradhar et al. (2019), the scientific community carried out an epidemiological study of eye disorders especially on the Bangladeshi slum dwellers, and they found that conjunctivitis prevalence was 17.1% among 432 respondents, making it the second most common eye condition [4]. 15% and 2.1% were allergic and infectious among them, respectively.

Fig. 1 depicts the three main forms of conjunctivitis—viral, allergic, and bacterial—along with the associated clinical symptoms [11]. The most common causes of infectious conjunctivitis include bacteria, viruses, fungi, and parasites. However, it is claimed that viruses cause 80% of acute conjunctivitis instances. Some recent photos of conjunctivitis patients in the OPDs of eye hospitals in Dhaka city are shown in Fig. 2. Although the majority of clinical pictures goes in favor of viral conjunctivitis, it differs from allergic conjunctivitis, which is often seen in the summer. Recently, the disease's trend in Sylhet and Narayanganj is reported as well [12,13].

A study on the distribution of eye illnesses and their management at a national super-specialized eye hospital was carried out a few years ago by Sultana et al. (2019) [5]. On a pie chart, we displayed their statistics (Fig. 3). Despite the fact that they did not report infectious conjunctivitis separately, when bacterial ocular infection, fungal conjunctivitis, fungal keratitis, and viral infection are taken into account from Fig. 3, the prevalence of ocular infectious disease (including conjunctivitis) among patients with other eye diseases was 16.48%. When only viral infections (including conjunctivitis) are taken into account, the past prevalence was 5.89% in the literature. However, given that our most recent conjunctivitis images in Fig. 2 suggest that the majority of these infections are viral, the most recent observed prevalence of almost 33.33% is unquestionably higher than the anticipated prevalence rate. In order to evaluate if there is an epidemic due to the higher disease notification rate and to decide the best treatment plan, more epidemiological studies are required.

3. Current disease pattern and our awareness

Viral conjunctivitis is usually self-limiting and typically increases in severity until day 4 or 5 & resolves within the following 1–2 weeks for a

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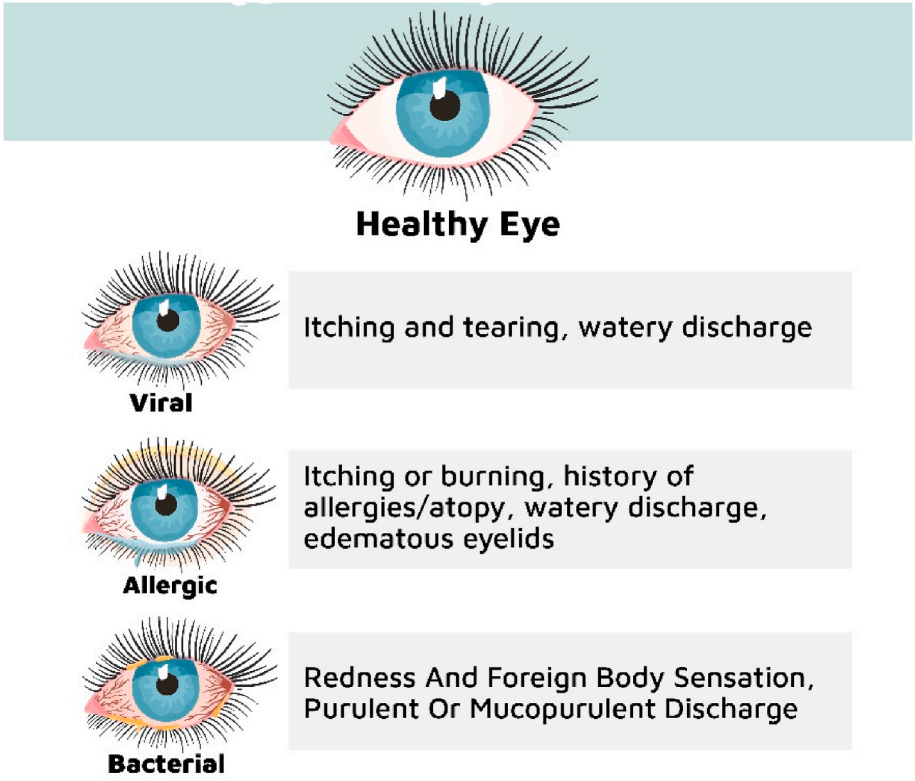

Fig. 1. Major Types of Conjunctivitis and their Clinical Manifestations.

Fig. 2. Some recent images of conjunctivitis cases in OPDs of eye hospitals in dhaka. [Image courtesy: Dr. Salma parvin, associate professor & head of the department, department of ophthalmology, green life medical college; consultant, Bangladesh eye hospital]. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

total duration of 2–3 weeks [11]. In some recently reported cases, conjunctivitis persisted even after 7 days [8]. So, empirical treatment should be given based on conjunctival swab culture and other microbial assessments if it persists long and should be referred to ophthalmologists.

The US Centre for Disease Prevention and Control (CDC) recommendations on conjunctivitis prevention are delineated in https://www.cdc.gov/conjunctivitis/about/prevention.html [14]. In the COVID-19 pandemic, several assessments on the hygiene status of Bangladeshi people were done [15,16]. 95% of Bangladeshi people washed their hands via soap which is really satisfactory [15], but only 33.9% of people washed their hands for more than 20 seconds in some rural areas [16]. The transmission of the diseases should be therefore controlled by proper mass education and awareness. Though complications from

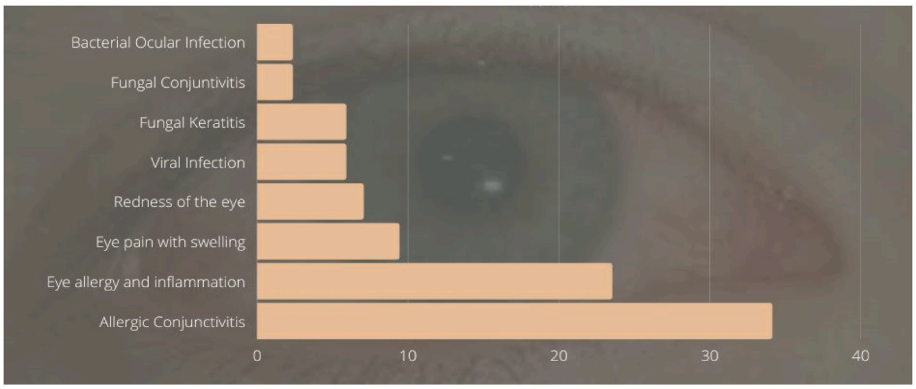

Fig. 3. Percentage distribution of patients in a super specialized eye hospital in Bangladesh. (2019).

conjunctivitis are rare [11], the immunocompromised patients of the community should be prevented from further complications. Yet, dry eye, infection, and corneal scarring are typical side effects of conjunctivitis. Chronicity of the illness, if left untreated, can cause secondary keratoconus and limbal stem cell deficiency, both of which can be dangerous to vision [17].

Also, some social stigmas should be fought against. A myth is still believed in some people of Bangladesh that eye-to-eye contact with a conjunctivitis-affected person may cause conjunctivitis. Also, some schools and other educational institutions have been closed for weeks due to the recent incidence of conjunctivitis in Chattogram and other areas as reported by journalists [7]. Even in Faridpur, schools and other educational institutions have been closed as reported on 29 September 2022 [18]. It is alarming in a period where the country is still fighting to keep up the pace of its education after COVID-19 and may have a negative impact on its education. CDC doesn't recommend isolation of conjunctivitis patients from schools or workplaces, rather recommends some disease control measures. Bangladesh has previously observed some more outbreaks of conjunctivitis during 1971 (in the Indian refugee camps of the liberation war, hence, often called Pink Eye 1971 or Joy Bangla disease), 1981 (by enterovirus 70), and 2020 (due to COVID-19) [19–21]. It should thus be assessed if there is any relation between these infections with post-COVID immunity. Also, the largest airport of the Bangladesh, Hazrat Shahjalal International Airport has announced passengers with conjunctivitis should go for a medical check-up before they are allowed to travel. Nevertheless, the higher disease notification rate solicits rapid epidemiological assessments and proper mass awareness.

4. Conclusion

Due to the damage COVID-19 has done to Bangladesh, the medical sector now faces formidable obstacles. Being one of the most populous nations in the world, Bangladesh is endangered to many contagious diseases usually. Conjunctivitis is a recent add on to the list. In addition to its impact on health, it is going to have a negative impact on the nation's education too due to lack of public awareness. Regardless of the rarity of its complications, effective public education and awareness should be carried out to keep the spreading and disease impacts under control. Measures should be taken to prevent its transmission to its neighbouring countries too. Finally, action has to be taken to reign it in, and governments and non-governmental organizations should work together.

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1. Name of the registry:
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