

Case Report on Conjunctivitis an Outbreak Disease in Dehradun India

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ABSTRACT

On July, 2023, the head of a GDMC, Dehradun similar eye symptoms among the students. We investigated the cluster to confirm the diagnosis, identify potential exposures, and propose recommendations. We defined a case as redness/watering/discharge from any eye among the students 15 July, 2023 to 20 August 2023. We actively searched for the cases and calculated attack rates. We drew epidemic curve by date of symptoms onset. We conducted a Prospective cohort study of students and staff. We collected data on potential exposures and calculated Risk Ratio (RR), 95% Confidence Interval (95%CI), and Population Attributable Risk (PAR).

Keywords- conjunctivitis, viral conjunctivitis, disease outbreak, India, risk factors.

I. INTRODUCTION

Because of the recent rains and floods, there has been a rise in the number of cases of eye flu reported in schools, placing the pupils in jeopardy. The following are some precautions that adults can take to ensure the safety of their children. The eye infection conjunctivitis, more commonly referred to as "pink eye," is highly contagious and affects a large number of people. In addition to being an infection that is brought on by viruses, conjunctivitis can also be brought on by bacteria or an allergy that affects the eyes. It would appear that there is a widespread outbreak of conjunctivitis throughout the districts surrounding Dehradun. Both the wet season and the highly contagious nature of the viral strain contributed to the virus's rapid spread throughout the world. Outpatient eye clinics in Dehradun's hospitals are being inundated with patients suffering from an outbreak of eye sickness.

The medical staff have also become infected with the sickness, which is generating further difficulties for them. Over seventy people have lately been examined at the ocular outpatient department (OPD) of Government Doon Medical College (GDMC) suffering with conjunctivitis, popularly known as "eye flu." According to Dr. Sushil Ojha, associate professor in the GDMC's department of ophthalmology, fig:1 (a) & (b) the virus thrives in conditions where there is a lot of moisture in the air. He recommended that patients keep their distance from large groups of people for at least a week.



Figure: 1 (a) Govt doon medical College (b) Department of Ophthalmology check patients

II. METHODOLOGY

On the basis of the procedures in the field epidemiology portion of the inquiry into the epidemic, we carried out an investigation into a cluster of eye complaints that had been reported by visually impaired students. An ophthalmologist evaluated the patients who were reported as cases and contributed their findings to the process of developing a case definition for this cluster. We classified a case as the incidence of any of the following eye symptoms in any of the eyes among the children and personnel of the school for the visually impaired between July 15 and August 20 2023. These symptoms include redness, watering, discharge, and the sense that there is something foreign in the eye. After conducting an aggressive search among the faculty and students, we identified the cases that satisfied the case definition and line-listed them. In the

line list, we collected data regarding demographics as well as clinical symptoms. In order to establish a hypothesis, we conducted interviews with a few key informants, such as case-patients and staff members at the school for the visually impaired. The interviews focused on the chronology of events and illnesses. For the purpose of conducting a microbiological examination, we obtained conjunctival swabs from three of the case patients. As a means of putting the hypothesis to the test, we carried out a Prospective cohort research on the pupils and faculty of the school FOR THE VISUALLY IMPAIRED. THROUGH THE USE OF INTERVIEWS and a data collecting instrument with a semi-structured format, we gathered information on potential exposures. Epi Info (Version 7.2) was our tool of choice for managing and analysing the data.

III. RESULT & DISCUSSION

There were a total of 51 people present at the school for the visually impaired; of those, 44 (or 86%) were enrolled as pupils, and 7 (or 14%) were employed there. The students' ages ranged anywhere from six to thirteen years old, with the median being eleven years old. 24 of the 44 students were male, which makes up 55% of the total, while 38 of the students stayed in the hostel that was located on the school site. The employees' ages ranged anywhere from 34 to 48 years old, with the median being 42 years old. Five of the seven staff members were women, and three of them were guests at the hostel themselves.

The ophthalmologist made a clinical diagnosis of acute conjunctivitis for each of the instances that were found. We were able to identify 39 cases (76%) out of the 51 people who attended the school for visually impaired individuals, of which 38 (97%) were students. The age range of the case-patients was from 6 to 48 years, with 11 years being the median age. The dates that the instances were recorded ranged from July 15th, 2023 to August 20th, 2023 (fig.2). The shape of the epicurve was consistent with an infection being passed from person to person (fig. 2). The interviews with the key informants revealed that the index patient had a history of outstation travel. They also disclosed that the index patient attended GMDH Dehradun, India, on July 15, 2023 to August 20, 2023, and that they had symptoms five days after the event. Twenty of the 39 people were male, making up 51% of the total, while 38 out of 39 (97%) remained in the hostel. Every single one of the 39 case-patients experienced redness and watering in both of their eyes. Pain or discharge in either of the eyes was experienced by 12 (31%) of the case patients, while 28 (72%) of the case patients reported having eye pain. Almost all of the individuals acquired the second eye infection within the first 48 hours of developing the first eye symptom. This was the situation for almost all of the instances.

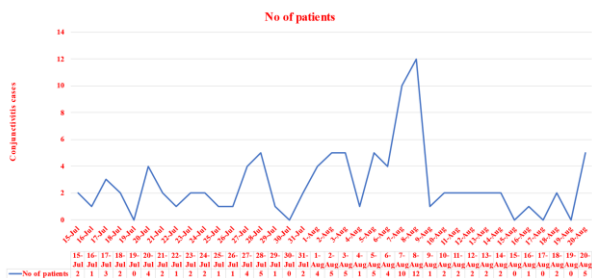


Figure 2: Acute conjunctivitis cases among students in GMDH, Dehradun India during the months of July and August 2023, arranged according to the day on which symptoms first appeared.

IV. CONCLUSION

This epidemic of acute conjunctivitis among the students and employees of a school for the visually impaired was caused by contact with a person who had the disease and by remaining in a setting that encouraged closer congregation. Education and knowledge on early diagnosis of symptoms, followed by personal hygiene measures and timely isolation, might avoid such outbreaks in the future in settings that are comparable to those used previously. However, implementing such preventative measures among visually challenged students while they are housed in a closed-off hostel environment is difficult. We believe that the health education of the staff and carer in such difficult environments would be able to recognise sick patients at the earliest possible stage.

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