Knowledge and Awareness of Eye Flu among the Dentists and Dental Auxiliaries of Udaipur City, Rajasthan

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Brief Communication

ABSTRACT

Background: Conjunctivitis is the inflammation of the conjunctiva and has 4 main causes-viruses, bacteria, allergens, and irritants. Among these, bacterial conjunctivitis is most common and is contagious, especially when the dentist is working with the infected person, and that person spreads the same to the other patient.

Methods: A pretested questionnaire survey was conducted among 152 subjects (those who were present at the time of survey) aged 18 to 60 years of Udaipur city, Rajasthan in March 2012. Ethical clearance was obtained from relevant authority. Written informed consent was obtained from study participants.

Results: All (80 dentists and 72 dental auxiliaries) the subjects returned the questionnaire. Regarding previous experience of eye flu, 67 (44.08%) participants reported that they had been infected with eye flu previously. Majority 123 (80.92%) of participants agreed that virus or bacteria caused eye flu. Majority of 145 (95.39%) of the participants agreed that the eye turns red during eye flu. One hundred and twenty three (80.92%) subjects replied that the dental treatment for a patient infected with eye flu should be delayed till the symptoms subside.

Conclusions: Eye flu being an occupational hazard among dentists, personal ophthalmic prophylactic care is a must which helps in prevention of spread of infection to other patients and family members.

Keywords: Dentists, dental auxiliaries, eye flu, infection

INTRODUCTION

Conjunctivitis is the inflammation of the conjunctiva and has 4 main causes-viruses, bacteria, allergens, and irritants. Of these, the acute infective causes (viruses and bacteria) are the most frequently encountered ocular disorders in primary care.[1,2] Clinically, it is difficult to distinguish bacterial from viral conjunctivitis.[3]

The most prominent symptoms of acute infective conjunctivitis include mild pruritus, foreign body sensation,

and mild photophobia. The most prominent signs include crusted eyelids that are often matted shut, especially after sleep, generalized conjunctival infection, and either watery or purulent discharge from one or both eyes, but no loss of visual acuity.[4]

Among eye infections, Herpetic Keratitis is one of the worst that can be contracted by clinical dental staff, but bacterial conjunctivitis caused by *Staphylococcus aureus* is more common.[5] Other conjunctival pathogens such as Chlamydia trachomatis have been reported, although rarely, to have been transmitted in dental practice.[6] Dental hygienists and dentists had a higher incidence of conjunctivitis than dental technicians and dental assistants.[7] So enough knowledge and awareness of conjunctivitis is necessary for prevention and spread of conjunctivitis in dental clinics.

At a normal working distance, there is no zone of safety from organism bearing droplets[8] and bacteria may remain in suspension in the air for up to 30 min.[9] There is a risk that the protective mechanisms of the eye may be overwhelmed by such high concentrations of pathogen.[7]

Hence, the present study was undertaken to assess the knowledge and awareness regarding eye flu among the dentists and dental auxiliaries of Udaipur city, Rajasthan, India.

METHODS

A pretested questionnaire survey was conducted among 152 subjects (those who were present at the time of survey) aged 18 to 60 years of Udaipur city, Rajasthan in March 2012. Prior to the survey, ethical clearance was obtained from relevant authority. The respective concerned authorities were approached and explained the nature of the study and permission was obtained. Written informed consent was obtained from study participants. Single trained interviewer described the purpose and process of the survey to the participants and gave standardized instructions for completing the questionnaire. The questionnaire was pretested in pilot study among 20% of participants. Kappa (k), weighted kappa (kw) were used to evaluate the test-retest reliability of the questionnaire and internal consistency was assessed by Cronbach's alpha (α) coefficients (k = 0.86), (kw = 0.9), (α =0.78). The questionnaire proforma comprised of demographic data like name, age, sex, education, employment and questions regarding previous eye flu infection, causes of conjunctivitis, signs and symptoms, spread of diseases and dental treatment with eye flu infected person. The script was presented both in English and Hindi for easy understanding and convenience of the study participants. It took about 6 to 8 min to complete the questionnaire.

RESULTS

All (80 dentists and 72 dental auxiliaries) the subjects (mean age 28.40 ± 6.38 years) returned the questionnaire.

Out of total participants, majority of 106 (69.74%) were male and 46 (30.26%) were female. Regarding the education of staff members, majority 74 (48.68%) were graduate and only 6 (3.95%) was illiterate [Table 1].

When asked about the previous experience of eye flu, 67 (44.08%) participants reported that they had been infected with eye flu previously.

Regarding the causes of conjunctivitis, majority of 123 (80.92%) of participants agreed that virus or bacteria caused eye flu [Table 2].

Majority of 145 (95.39%) of the participations agreed that eye turned red during eye flu [Table 3].

Majority of study participants 123 (80.92%) replied that the dental treatment should be delayed for a patient infected with eye flu till the symptoms subside.

Table 1: Demographic characteristics of the participating dentists and dental auxiliaries

Demographic data	*n* (%)
Sex	
Male	106 (69.74)
Female	46 (30.26)
Total	152 (100)
Education	
Illiterate	6 (3.95)
Schooling	25 (16.45)
Graduation	74 (48.68)
Post graduation	47 (30.92)
Total	152 (100)
Employment	
Dentists	80 (52.63)
Dental auxiliaries	72 (47.37)
Total	152 (100)

Table 2: Causes of conjunctivitis as reported by the dental professionals

Causes of conjunctivitis	Agree (%)	Disagree (%)	Do not know (%)	Total (%)
Direct contact with infected person	123 (80.92)	26 (17.10)	3 (1.97)	152 (100)
Over crowding	101 (66.45)	44 (28.95)	7 (4.60)	152 (100)
Unhygienic surroundings	97 (63.82)	44 (28.95)	11 (7.23)	152 (100)
Eyestrain	29 (19.08)	94 (61.84)	29 (19.08)	152 (100)
Bacteria/virus	129 (84.87)	18 (11.84)	5 (3.29)	152 (100)
Irritating substance or material in the eyes	57 (37.50)	83 (54.61)	12 (7.89)	152 (100)
Allergies	66 (43.42)	63 (41.45)	23 (15.13)	152 (100)
Environmental factors, such as smoke, dust, or pollen	65 (42.76)	69 (45.39)	18 (11.84)	152 (100)
Chemical splash in the eye	53 (34.87)	76 (50)	23 (15.13)	152 (100)

Table 3: Dental professional's knowledge regarding signs and symptoms of conjunctivitis

Signs and symptoms	Agree (%)	Disagree (%)	Do not know (%)	Total (%)
Eyes turn reddish	145 (95.39)	7 (4.61)	0 (0)	152 (100)
Itching in the eyes	137 (90.13)	14 (9.21)	1 (0.66)	152 (100)
Watery secretion from the eyes	133 (87.50)	13 (8.55)	6 (3.94)	152 (100)
Pus formation in the eyes	56 (36.84)	71 (46.71)	25 (16.45)	152 (100)
Redness in the inner eyelid	129 (84.87)	15 (9.87)	8 (5.26)	152 (100)
Increased amount of tears	118 (77.63)	22 (14.47)	12 (7.89)	152 (100)
Thick yellow discharge from the eyes, which crusts over the eyelashes, especially after sleep	101 (66.45)	31 (20.39)	20 (13.16)	152 (100)
Green or white discharge from the eyes	39 (25.66)	60 (39.47)	53 (34.87)	152 (100)
Burning eyes	132 (86.84)	16 (10.53)	4 (2.63)	152 (100)
Blurred vision	72 (47.37)	54 (35.53)	26 (17.10)	152 (100)
Increased sensitivity to light	107 (70.39)	43 (28.29)	2 (1.31)	152 (100)
Inflamed eyes	133 (87.50)	15 (9.87)	4 (2.63)	152 (100)

DISCUSSION

To our knowledge this is the first study to explore knowledge and awareness of eye flu among the dentists and dental auxiliaries. The results in the study were reasonably reliable and can be generalized.

In the present study, 67 (44.08%) reported that they had been infected with eye flu previously while in the study done among 204 dental person in Riyadh, Saudi Arabia, 73 (35.78%) study subjects and 42.9% dentists had been infected with eye flu.[7]

In the present study, 145 (95.39%) subjects had reported that redness of eye was the clinical feature of eye flu while 211 subjects out of 232 had reported that eye turned red in eye flu.[10]

Doctors, parents have differing perspectives and agendas for the management of this condition. Factors that influence the decision include beliefs about the condition and the need for treatment, patient's own time, economic considerations and public health policy.[11]

In the present study, 123 (80.92%) dentists reported that direct contact with infected person was the cause of conjunctivitis. In Hampshire, UK, 134 out of 229 general practitioners used past history of contact with infected person for diagnosis of conjunctivitis.[10] Viral and bacterial forms of conjunctivitis can be spread easily from person to person. They can be spread by coughing or sneezing. Bacteria or viruses can get in your eyes through contact with contaminated objects, including hands, washcloths or towels, cosmetics, false eyelashes and soft contact lenses.

Proper hand and eye hygiene is necessary for prevention and treatment of eye flu as there is a high spontaneous remission rate for bacterial conjunctivitis. If there is no improvement after 2-3 days of conservative management of eye flu, ophthalmic antibiotics should be prescribed.[12] Limited evidence suggests that bacterial conjunctivitis is self limiting, with 64% of cases resolving in 2 to 5 days without treatment,

topical antibiotics are prescribed in an attempt to shorten the illness, reduce complications and re-infection. However, evidence for their effectiveness is limited.[13] Education regarding the self-limiting nature of the condition and the minimal need for antibiotics is important for changing the management expectations of parents, schools, and day cares. Written materials, such as pamphlets, are safe and cost-effective way of facilitating such education, with high rates of patient satisfaction and compliance.[12]

CONCLUSION

Eye flu being an occupational hazard among dentists, personal ophthalmic prophylactic care is a must which helps in prevention of spread of infection to other patients and family members.

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