Vol: 02, Issue 04
OPHTHALMOLOGY PAKISTAN

Prevalence of trachoma in madrassa students of Kasur

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Purpose: To determine the prevalence of trachoma in madrassa students of Kasur

Materials and Methods: This study was conducted at Bhatti International Teaching Hospital Kasur / Central Park Medical College Lahore where a 6 days free eye camp was organized for madrassa students. Students from various madrassas who visited the hospital were enrolled as participants of study. WHO simplified grading system for trachoma was used to record the findings.

Results: Out of 510 participants of study fifty cases (9.80%) were diagnosed as trachoma. All cases seen were having active trachoma. Forty cases (7.84%) were graded having TF stage while ten cases (1.96%) had TI. None of them was having TS, TT or TO grade. Forty out of 470 male participants were diagnosed as cases of active trachoma. 39 male students had TF grade. TI was noted in only one male student. Ten out of 40 female participants were detected as cases of active trachoma. TI grade was found in 9 females whereas TF grade was detected in only one female student.

Conclusion: Trachoma is still an important public health problem in deprived communities of Pakistan like madrassa students. The disease is more prevalent and more severe in females.

INTRODUCTION

Trachoma is disease of poor and deprived communities. It is related to poor hygiene, overcrowding, poor sanitation and inadequate nutrition.[1-7] It is caused by serotypes A, B, Ba and C of essential intracellular bacterium Chlamydia Trachomatis. The housefly is a common vector but there may be direct transmission from eye or nasal discharge. Acute infection (active trachoma) occurs in children and their contacts whereas complications of trachoma like scarring of conjunctiva and corneal opacification develop later in life.[8]

WHO has convened an alliance of member countries, non-governmental organizations, and other partners for the Global Elimination of Blinding Trachoma by the year 2020[(9)], and endorsed the multi-faceted SAFE strategy for trachoma control.[10-11] The acronym SAFE stands for Surgery for trichiasis, Antibiotics, Facial cleanliness and Environmental change, such as clean water and latrines.

The aim of current study was to determine prevalence of trachoma in madrassa students of Kasur who mostly belong to deprived strata of community and do not enjoy high living standards.

Materials & methods

This study was conducted at Bhatti International Teaching Hospital Kasur / Central Park Medical College Lahore where a 6 days free eye camp was organized for madrassa students. Students with history of chemical or mechanical trauma, eye surgery, ocular allergies and prolonged use of topical medication were excluded from study. Rest of the students visiting hospital were enrolled as participants of study.

After taking informed consent a detailed ocular and systemic history was taken. Anterior and posterior segment were examined and findings were recorded. Upper lid of each participant was everted to see the signs of trachoma. WHO simplified grading system for trachoma was used to record the findings.[12-13]

WHO simplified grading system of trachoma 2 (FISTO)

GRADING	CLINICAL FINDINGS
Trachomatous follicle (TF)	Trachomatous inflammation with 5 or more follicles of at least 0.5 mm diameter on the upper central tarsal conjunctiva. A few follicles at limbus
Trachoma intense (TI)	Trachoma inflammation intense with numerous follicles and papillae. Thickening of the upper tarsal conjunctiva obscures more than 50% of the deep conjunctival vessels. Pannus formation
Trachomatous scarring or cicatricial trachoma (TS)	Upper tarsal conjunctival linear, band shaped or star shaped scarring Arlts line. Limbal follicles heal with pits (Hebert's pits)
Trachomatous trichiasis (TT)	Presence of at least one misdirected eye lash rubbing the eye ball
Trachomatous opacities (TO)	Presence of a corneal opacity covering part of the pupillary margin

Results

A total number of 510 madrassa students including 470 males (92.16%) & 40 females (7.84%) participated in this study. Age and sex distribution of the participants is shown in table 1. Total fifty cases (9.80%) were diagnosed as trachoma. All cases seen were having active trachoma. Forty cases (7.84%) were graded having TF stage while ten cases (1.96%) had TI. None of them was having TS, TT or TO grade. Forty out of 470 male participants were diagnosed as cases of active trachoma. 39 male students had TF grade. TI was noted in only one male student. Ten out of 40 female participants were detected as cases of active trachoma. TI grade was found in 9 females whereas TF grade was detected in only one female student.

Table 1: Age and sex distribution of madrassa students participating in study.

Age (years)	Male (%)	Female (%)	Total (%)
5-10	50 (9.80%)	20 (3.92%)	70 (13.73%)
11-15	290 (56.86%)	20 (3.92%)	310 (60.78%)
16-20	120 (23.52%)	0.00	120 (23.52%)
20-25	10 (1.96%)	0.00	10 (1.96%)
Total	470 (92.16)	40 (7.84%)	510 (100%)

Table 2: Trachoma staging in madrassa students (total) n=510

Age (years)	TF	TI	TS	TT	TO	Total
5-10	11 (2.16%)	0.00	0.00	0.00	0.00	11 (2.16%)
11-15	22 (4.31%)	10 (1.96%)	0.00	0.00	0.00	32 (6.27%)
16-20	07 (1.37%)	0.00	0.00	0.00	0.00	07 (1.37%)
20-25	0.00	0.00	0.00	0.00	0.00	0.00
Total	**40 (7.84%)**	**10 (1.96%)**	**0.00**	**0.00**	**0.00**	**50 (9.80%)**

Table 3: Trachoma in madrassa students (males) n=470

Age (years)	TF	TI	TS	TT	TO	Total
5-10	10 (2.12%)	0.00	0.00	0.00	0.00	10 (2.12%)
11-15	22 (4.68%)	01 (0.21%)	0.00	0.00	0.00	23 (4.89%)
16-20	07 (1.49%)	0.00	0.00	0.00	0.00	07 (1.49%)
20-25	0.00	0.00	0.00	0.00	0.00	0.00
Total	39 (8.30%)	01	0.00	0.00	0.00	40 (8.51%)

Table 4: Trachoma in madrassa students (females) n=40

Age (years)	TF	TI	TS	TT	TO	Total
5-10	01 (2.5%)	0.00	0.00	0.00	0.00	01 (2.5%)
11-15	0.00	09 (22.5%)	0.00	0.00	0.00	09 (22.5%)
16-20	0.00	0.00	0.00	0.00	0.00	0.00
20-25	0.00	0.00	0.00	0.00	0.00	0.00
Total	**01 (2.5%)**	**09 (22.5%)**	**0.00**	**0.00**	**0.00**	**10 (25%)**

Discussion

Trachoma is prevalent among poor and deprived communities of Pakistan. Unfortunately as for many other diseases which are found in poor communities of developing countries, there is paucity of epidemiological information about this disease. There are few studies available on prevalence of trachoma in Pakistan. Mariotti SP et al in 2009 reported that 40.6 million people of world were suffering from active trachoma while 8.2 million were having trichiasis. . Regarding global distribution of glaucoma, it varies from country to country or even among different communities of the same country.[14] It is more common in countries of Africa, Eastern Mediterranean, South-East Asia. While developed countries have succeeded in lowering the prevalence of disease to minimal levels, poor and developing countries are still far behind.[15-17]

In our study, all the patients were at the stage active trachoma. None of them was identified as TS TT, TO. This can be explained by the fact that most of the participants of current study belonged to younger age group. Complications of trachoma are uncommon in this age group and appear later in life. High prevalence and severity of trachoma among female participants indicate low living standards of females as compared to males. High prevalence and severity of disease among females is also found in other parts of world. Cromwell A E et al in 2009[18] and Khanduja S et al in 2012 [19] in their studies reported excess burden of trachoma in female part of community.

Conclusions

Trachoma is still an important public health problem in Pakistan especially among the poor, deprived & overcrowded strata of rural population like madrassa students of Kasur who are deprived of basic facilities of life. The disease is more prevalent and more severe in females.

Recommendations

It is need of the hour to implement GET 2020 and SAFE strategy plan of WHO. Community health workers, teachers & NGO's should take part in educating the people about trachoma. TV, radio and print media should play their role in creating awareness among people against this disease. Government of Pakistan should put every possible effort to raise the living standards of its people. Provision of clean water, clean environment, proper sanitation, adequate nutrition and healthcare facilities can improve the situation

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