

## Epidemiology of Trachoma: A Report by Sitapur Trachoma Study Group

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### Abstract

Trachoma is the most common cause of infectious blindness worldwide and it affects more than 150 million people. Despite of various control programs, it still persists and lead to significant ocular morbidity. We have done Prospective clinical epidemiological study conducted at Regional Institute of Ophthalmology (RIO) & Sitapur Eye Hospital (SHE), Sitapur, Uttar Pradesh, India. RIO & SEH is a large tertiary care hospital working with community since 1935 and serves more than 32 cities and towns in the states of Uttranchal and Uttar Pradesh of India and rest of its 32 branches all over. Cases were selected from our OPD clinic and findings were verified by 2 independent ophthalmologists. Percentage of patients with fresh cases / active trachoma- 64 and percentage of patients with active on chronic / old trachoma- 36.7%. Trachoma remains still an unconquered scourge.

### Keywords:

Trachoma; Chlamydia trachomatis; Egyptian ophthalmia

### Introduction

Trachoma is the most common cause of infectious blindness worldwide and it affects more than 150 million people, with 10 million people developing secondary trichiasis and approximately 6 million blinded from the sequel of the disease across the globe [1]. It is third most common cause of blindness worldwide after cataract and glaucoma [2]. In India the prevalence has decreased drastically from the levels in early 60s when National program of control of trachoma was launched in 1963, but the disease still persists, causing significant visual morbidity.

### Aims and Objective

To study the epidemiological profile of trachoma patients in current scenario in this part of the world.

### Material and Methods

A Prospective clinical epidemiological study conducted at Regional Institute of Ophthalmology (RIO) & Sitapur Eye Hospital (SHE), Sitapur, Uttar Pradesh, India. RIO & SEH is a large tertiary care hospital working with community since 1935 and serves more than 32 cities and towns in the states of Uttranchal and Uttar Pradesh of India. Today the original hospital in Sitapur is a 1000 bed facility and has more than 1500 beds amongst the rest of its 32 branches all over. The study was done between May 2012 to June 2013 (study is still continuing). 75 patients were included. Cases were selected from our OPD clinic and findings were verified by 2 independent ophthalmologists. Only ACTIVE trachoma cases were included, which were identified in this study by presence of two of the following clinical features (Following WHO guidelines).

- Conjunctival follicles on the upper tarsal conjunctiva
- Limbal follicles and their sequelae (Herbert pits)

- Typical tarsal conjunctival scarring
- Vascular pannus most marked on the superior limbus

WHO classification System was used for clinical diagnosis and grading

**Trachomatous inflammation – follicular (TF):** Five or more follicles in the upper tarsal conjunctiva, the follicles must be at least 0.5 mm in diameter.

**Trachomatous inflammation – intense (TI):** Inflammatory thickening of the tarsal conjunctiva that obscures more than half of the normal deep tarsal vessels.

**Trachomatous scarring (TS):** The presence of scarring in the tarsal conjunctiva.

**Trachomatous trichiasis (TT):** At least one eyelash rubs on the eyeball. Evidence of recent removal of in-turned eyelashes should be also graded as trichiasis.

**Corneal Opacity (CO):** Easily visible corneal opacity over the pupil. Sufficient to blur the iris details.

### Results

Majority of the active disease was seen in young, less than 35 years age group. The gender distribution of disease showed an interesting pattern, in childhood group.

- Age
  - <10 years 50%
  - 25-35 years 40%
  - Others: 10%
- Gender
  - Males>female in childhood
  - Female>Male in adult group
- Socioeconomic status

Middle class>low>higher

- Profession

Student>Housewives>Farmers

- Mean duration (days) of presentation to hospital: 8-12 days
- Seasonal variation- a bi peak modal one peak comes between mid of March to 1<sup>st</sup> week of May and second on mid of September to mid of October.
- % of patients with fresh cases / active trachoma- 64.3%
- % of patients with active on chronic / old trachoma- 36.7%
- % of patients with active trachoma on treatment or partly treated elsewhere-11.4%
- % of patients with trachoma misdiagnosed elsewhere-3%
- % of patients with Unilateral trachoma -15%
- % of patients with other member have trachoma at same time-21.8%
- % of patients according to WHO classification

Stage 1-3.24.2%

Stage 2-30.6%

Stage 3-20 %

Stage 4-13.2%

Stage 5-3%

- % of patients with active trachoma lost to follow-up-13%
- Patients were treated according to these guidelines of WHO, modifications were done to suit individual patient needs.

Antibiotic therapy indicated for TF and TI stage only. A single dose of oral Azithromycin (1 gm) is recommended for adults. In children less than 8 years of age and pregnant women, oral erythromycin should be used (250 mg/ 500 mg BD for 14 days) [3].

For TT stage; few lashes can be managed by hyfrecation, radiofrequency epilation or cryotherapy where as Bilamellar tarsal rotation is the surgical procedure of choice, when multiple lashes are involved and in experienced hands it has an overall success rate of 80% [4].

For CO stage Penetrating Keratoplasty (PK) is surgical procedure of choice once the lids and lashes have been managed, but the outcome of PK remains less than optimal because of Extensive corneal vascularization and Ocular surface disorder (OSD). Because of associated OSD, punctual occlusion and lateral tarsorrhaphy may be useful adjuncts to consider for increasing the success of PK [5].

## Discussion

Lack of current credible data on prevalence of trachoma is not available for India, which gives an impression that trachoma is no longer a public health problem. The prevalence of trachoma has decreased from 71.07% in 1977 [3], when it was among the top five cause of blindness in India to 8.5 % in 1998 due to active intervention from both government and non government organizations under the aegis of National Programme for Trachoma Control (NPTC), which was launched in 1963 [4,5]. The recognition, that trachoma is a major cause of blindness lead to NPTC even before national programme of control of blindness, which was launched in 1976. The success of various health programmes cannot be denied, but the trachoma persisted and now has shown upsurge, due to lack of

awareness and interest by government agencies. Trachoma prevalence in India has been reported to be varying between 0.5 to 80 per cent, according to studies conducted across various centers [6-13]. Community studies were conducted to find out the true prevalence of *Chlamydia trachomatis* infection using laboratory support in the known hyperendemic belt of northern India by the Trachoma Study Group in 1998 (Uttar Pradesh) and later in 2007-2008 (Haryana) [5,9]. Sharma et al. from RP Center, AIIMS did a twelve year study (1997-2008) in rural northern India and has shown the prevalence of trachoma to be persisting in northern India, albeit at a lower level [14].

Sitapur Trachoma Study Group's ongoing prospective epidemiological study has shown that trachoma is still prevalent in this part of rural India causing significant visual morbidity.

## Conclusion

Trachoma remains a still unconquered scourge due to lack of awareness. Ophthalmic care givers must recognize it and treat it promptly and adequately to prevent avoidable blindness.

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