

Trachoma: UPSC Notes for GS-I

Trachoma infection of the eyes was the most important cause of blindness in India in the 1950s and over 50% of the population was affected in Gujarat, Rajasthan, Punjab, and Uttar Pradesh. Trachoma disease was the most important cause of corneal blindness in India, affecting young children.

This article will discuss in detail the contagious trachoma disease, its symptoms, causes, and prevention strategy. Trachoma has been the pandemic disease therefore 1 or 2 questions related to this disease might be asked in competitive exams.

Meaning Of Trachoma

Trachoma is an infectious disease caused by bacterium *Chlamydia trachomatis*. It is a chronic infectious disease of the eye and is the leading cause of infectious blindness globally. It is the outcome of inadequate access to water and sanitation and poor personal and environmental hygiene.

Trachoma directly affects conjunctiva under the eyelids. The inner surface of the eyelids are roughened due to infection. The infection causes inflamed granulation on the inner surface of the lids. Roughening could lead to pain in the eyes and breakdown of the outer surface of cornea of the eyes, eventually leading to blindness. Repeated trachoma infections could lead to permanent blindness, as the eyelids turn inward.

Trachoma Symptoms & Signs

The symptoms of trachoma include eye irritation with tearing, light sensitivity, pain, and vision loss. The signs include redness, presence of follicles, corneal opacity and scarring as described in the stages of Trachoma listed below.

Stages of Trachoma

The World Health Organisation grading system classifies the trachoma disease in 5 stages:

1. Follicular (TF) -Trachomatous Inflammation- this mostly requires topical treatment.
2. Intense (TI) at this stage topical and systemic treatments are considered.
3. Trachomatous Scarring - TS is the stage when scars are visible as in the tarsal conjunctiva and which may obscure tarsal blood vessels.
4. Trachomatous Trichiasis - when the affected person is referred for eyelid surgery it is the TT stage.

5. Corneal Opacity is the stage when the affected person is irreversibly blind.

Treatment For Trachoma - Control & Prevention

As reported by WHO, the number of people at risk of trachoma disease has fallen to 142 million in 2019 which was 1.5 billion in 2002.

The WHO Alliance for GET2020 i.e. Global Elimination of Trachoma by 2020 aims to eradicate trachoma completely through the implementation of SAFE strategy, a multifaceted strategy to prevent and treat trachoma disease.

SAFE is:

S = surgery to correct in-turned eyelids and trichiasis

A = antibiotics (azithromycin) to treat an active infection

F = facial cleanliness to reduce human transmission

E = environmental improvement to reduce human transmission like access to clean water, hygiene measures to reduce the fly population, etc.

The antibiotic treatment for active trachoma disease is a one time use of (Zithromax) azithromycin pills. However, reinfection is common if a person doesn't make improvements in hygiene and access to clean water.

Surgery is necessary to correct the lid position when the infection has progressed to inward-turning of the lashes. Sight restoration can be done through corneal transplantation surgery if corneal scarring develops significantly.

Various government agencies and INGDOs - International Non-Governmental Development Organizations, such as the Carter Center Trachoma Control Program, work together to implement the SAFE strategy.

To know more about the locations of Important Headquarters of International Organizations, visit the linked article.

Trachoma Disease Morbidity

Active trachoma i.e. inflammatory trachoma is common among children of preschool-age, with prevalence rates as high as 60–90%. Women are infected and blinded 2-3 times more often than men, because of the greater frequency of infection episodes probably due to their close contact with infected children.

Environmental risk factors influencing the Trachoma disease transmission include:

1. Inadequate sanitation facilities.
2. Shortage of water
3. Poor hygiene, and
4. Crowded households;

India Free From Trachoma

A National Trachoma Survey report surveyed active trachoma among children and declared India free from Trachoma. It showed overall prevalence of 0.7% only, which is much below the elimination criteria of infective trachoma as defined by the World Health Organisation. Active trachoma is considered eliminated if the prevalence of active infection is less than 5% among children below 10 years. It was stated by the Union Health Minister that the Survey results indicate that active trachoma is no longer a public health problem in India.

India has met the goal of Trachoma elimination as specified by the WHO under its (Global Elimination of Trachoma by the year 2020) GET2020 program.

This has been possible due to decades of inter-sectoral interventions and efforts that included the provision of antibiotic eye drops, availability of safe water, availability of surgical facilities for chronic trachoma, personal hygiene, improved environmental sanitation and a general improvement in the socio-economic status in the country.

Key facts related to Trachoma Disease

1. Trachoma is an eye disease caused by infection with the bacterium *Chlamydia trachomatis*.
2. Based on the data of March 2019, 142 million people are at risk of trachoma blindness as they live in trachoma endemic areas.
3. In 2018, Global-level antibiotic coverage for trachoma was 50%. About 146112 people received surgical treatment for advanced stage, and 89.1 million people were treated with antibiotics.
4. It is responsible for visual impairment and blindness of about 1.9 billion of the population. Trachoma disease is a public health problem in 44 countries.
5. Blindness resulting from trachoma disease is irreversible.
6. Infection of trachoma spreads over personal contact (via bedding hands or clothes) and by flies that have been in contact with an infected person. With repeated episodes of infection over the years, the eyelashes may be drawn in so that they rub on eye surface with pain and discomfort causing permanent damage to the cornea.
7. In 1998, the World Health Assembly adopted resolution WHA51.11 targeting the global elimination of trachoma as a public health problem.

8. The elimination strategy for trachoma is summarized by the acronym "SAFE", meaning Surgery for advanced disease, Antibiotics to clear C.trachomatis infection, Facial cleanliness and Environmental improvement to reduce transmission.

Aspirants preparing for UPSC 2020 or any of the above-mentioned exams must go through the following important links to ease your preparation.