

The Risk of Trachoma Infection Causes: Vision Difficulties in Humans

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DESCRIPTION

Trachoma, a neglected tropical disease caused by the bacterium *Chlamydia trachomatis*, has plagued humanity for centuries, leaving millions visually impaired or blind. Despite being entirely preventable and treatable, it continues to affect some of the world's most vulnerable populations, primarily in low-resource settings. Trachoma is the major infectious cause of blindness globally. It is a chronic and contagious eye disease that primarily affects impoverished communities in regions with limited access to healthcare, clean water, and sanitation. The disease is transmitted through direct contact with eye and nasal secretions of infected individuals or *via* contaminated fomites, such as towels and clothing. The progression of trachoma occurs in stages. It typically starts as a bacterial infection in childhood, with recurrent episodes leading to scarring of the inner eyelid. Over time, this scarring can cause the eyelashes to turn inward, leading to corneal abrasions and extreme pain. In the advanced stages, blindness can occur, as the cornea becomes irreparably damaged.

The impact of trachoma extends beyond the loss of vision. It affects an individual's quality of life, hinders economic opportunities, and places a considerable burden on affected communities. Moreover, it often perpetuates a vicious cycle of poverty, as those afflicted with trachoma are less able to work and provide for their families. Preventive measures and treatments for trachoma are well-established. Key strategies to combat the disease include the World Health Organization's SAFE strategy: Surgery to correct trichiasis (inward-turning eyelashes), Antibiotics to treat active infections, Facial cleanliness to reduce transmission, and Environmental improvements like access to clean water and sanitation. Mass drug administration with the antibiotic azithromycin is a key element of trachoma control efforts, effectively reducing the infection rates in endemic areas.

Several challenges hinder the elimination of this disease

Socioeconomic factors: Poverty, overcrowded living conditions, and inadequate sanitation facilitate the transmission of

trachoma. Efforts to improve living conditions and provide education on hygiene are crucial components of trachoma control.

Sustainability: Sustainable solutions are essential to ensure that trachoma control efforts are long-lasting. This includes training local healthcare workers, educating communities, and providing resources for self-sufficiency.

Data and surveillance: Obtaining accurate data on trachoma's prevalence and distribution is vital for targeting interventions. Challenges in data collection and reporting can hinder effective responses.

Facial cleanliness: Promoting facial cleanliness is a fundamental component of trachoma prevention. Individuals are taught to keep their faces clean to reduce the spread of infection. This includes regular face washing with soap and water, especially around the eyes, to prevent the transmission of *Chlamydia trachomatis* from one person to another.

Environmental improvements: Access to clean water and sanitation is crucial for trachoma control. Inadequate access to these basic services can lead to the contamination of faces, hands, and fomites, facilitating the spread of infection. Improved sanitation facilities and access to clean water sources are essential in preventing trachoma.

Health education: Community health education programs play a significant role in trachoma prevention. Educating communities about the disease, its mode of transmission, and the importance of facial cleanliness, hygiene, and sanitation can help raise awareness and drive behavior change.

Antibiotics: Mass Drug Administration (MDA) with the antibiotic azithromycin is a key preventive measure. This approach targets active trachoma infections within communities. It involves the distribution of antibiotics to entire communities, regardless of infection status, to treat current infections and reduce the overall burden of the disease. Antibiotics are administered by trained healthcare workers.

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CONCLUSION

The global community is making significant strides in the fight against trachoma. Organizations like the International Coalition for Trachoma Control (ICTC) and the World Health Organization (WHO) are working together to eliminate this blinding disease by 2030. Mass drug administration, surgical interventions, and hygiene promotion campaigns are central to these efforts. Trachoma, an ancient scourge, remains a pressing global public health issue. The disease's devastating impact on individuals and communities can be mitigated through well-established preventive measures and treatments. By eliminating trachoma entirely will require a concerted effort to address the

multifaceted challenges it presents, from healthcare access to socioeconomic conditions. With a commitment to sustainable solutions and the global community's collaboration, we have a chance to make trachoma history and ensure that no one suffers from this preventable cause of blindness. By focusing on facial cleanliness, environmental improvements, health education, mass drug administration, surgery, and improved healthcare access, it is possible to significantly reduce the burden of trachoma and work towards its global elimination as a public health problem. International organizations, governments, NGOs, and affected communities must collaborate to implement these strategies effectively and sustainably.