What is trachoma?

Trachoma is an eye infection caused by a type of bacteria called Chlamydia trachomatis. The early stage of trachoma usually occurs in young children, most commonly aged 2 to 3 years, but can occur in older children up to the early teenage years. If not treated, trachoma can damage the eyes and eyelids (trichiasis). This can make the eyelashes turn inwards and damage the front of the eye (cornea), which becomes ‘cloudy’. Eventually a person can become blind.

What causes trachoma?

Trachoma is highly infectious in its early stage, and the C. trachomatis bacterium is easily spread through infected secretions of the eye. It is due largely to sub-standard living conditions and overcrowded housing, where personal and community hygiene are hard to maintain. It is spread through close contact, such as playing and sharing the same bedding. Children are the main carriers of trachoma, but it can also be spread by flies. Trachoma is often found in dry and dusty environments.

What are the symptoms of trachoma?

Symptoms of active trachoma are inflammation and follicles (white lumps) under the upper eyelids. Children with active trachoma may have red, sore, sticky eyes with discharge from the nose. Some active trachoma may have no symptoms and can be present even in children with clean faces.

After repeated infections, scarring develops under the eyelids. The eyelashes turn in and rub on the cornea causing the condition trichiasis. This causes corneal scarring and can be painful. It can lead to vision loss and then blindness.

How is trachoma detected?

Trachoma is diagnosed using the World Health Organization (WHO) grading system developed in 1987. This method is used to assess the disease in each individual. Photographs can also be used. Screening for trachoma can be done by a health worker, or an eye care professional. Facial cleanliness is also observed.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Clinical signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trachomatous inflammation follicular (TF)</td>
<td>Five or more follicles of &gt;0.5mm on upper tarsal conjunctiva</td>
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<tr>
<td>Trachomatous inflammation intense (TI)</td>
<td>Inflammatory thickening obscuring more than half the normal deep tarsal vessels</td>
</tr>
<tr>
<td>Trachomatous conjunctival scarring (TS)</td>
<td>The presence of easily visible scars in the tarsal conjunctiva</td>
</tr>
<tr>
<td>Trachomatous trichiasis (TT)</td>
<td>At least one eyelash rubbing on the eyeball or evidence of recent removal of in-turned eyelashes</td>
</tr>
<tr>
<td>Corneal opacity (CO)</td>
<td>Corneal opacity blurring part of pupil margin</td>
</tr>
</tbody>
</table>

Source: A simplified WHO grading system for trachoma 1987

How is trachoma treated?

Trachoma is treated by the four elements of the SAFE strategy, which stands for:

• Surgery for in-turned eyelashes
• Antibiotics (medicine)
• Facial cleanliness and
• Environmental improvement.

Surgery is to prevent blindness for people who have trichiasis from repeated infections. Trachoma can be treated by taking antibiotics (azithromycin).

How can trachoma be prevented?

The best way to prevent and control trachoma is to improve environmental conditions, reduce overcrowded housing, promote clean faces for children and promote good hygiene practices in communities.

What is known about trachoma among Indigenous people?

Trachoma, which has been a major cause of blindness among Indigenous people, is still quite common in some communities in northern and central Australia. Recent evidence found the prevalence of active trachoma was 11% among Indigenous children across screened communities in NT, SA and WA in 2010. Nationally, the prevalence of trachoma was 9% among Indigenous adults aged over 40 years in 2008, and trachoma was the equal third leading cause of blindness (alongside diabetic retinopathy).

References and further reading

2. Correcting ten myths about eliminating trachoma (2011) Lange F, Taylor HR
The Australian Indigenous HealthInfoNet is an innovative Internet resource that contributes to ‘closing the gap’ in health between Indigenous and other Australians by informing practice and policy in Indigenous health.

Two concepts underpin the HealthInfoNet’s work. The first is evidence-informed decision-making, whereby practitioners and policy-makers have access to the best available research and other information. This concept is linked with that of translational research (TR), which involves making research and other information available in a form that has immediate, practical utility. Implementation of these two concepts involves synthesis, exchange and ethical application of knowledge through ongoing interaction with key stakeholders.

The HealthInfoNet’s work in TR at a population-health level, in which it is at the forefront internationally, addresses the knowledge needs of a wide range of potential users, including policy-makers, health service providers, program managers, clinicians, Indigenous health workers, and other health professionals. The HealthInfoNet also provides easy-to-read and summarised material for students and the general community.

The HealthInfoNet encourages and supports information-sharing among practitioners, policy-makers and others working to improve Indigenous health – its free on line yarning places enable people across the country to share information, knowledge and experience. The HealthInfoNet is funded mainly by the Australian Department of Health and Ageing. Its award-winning web resource (www.healthinfonet.ecu.edu.au) is free and available to everyone.