Trachoma - Eye Infection

Trachoma is a preventable eye condition caused by repeated infections with eye strains of the bacterium *Chlamydia trachomatis* that lead to a roughening of the inner surface of the eyelid. These strains are different from the genital strains which cause the common sexually transmissible infection referred to as ‘chlamydia’. It causes blindness in older people who have had severe active trachoma usually in childhood. It is the most common cause of infectious and preventable blindness worldwide. Trachoma occurs mainly in developing countries where living conditions are crowded and general hygiene is poor.

Active inflammation from trachoma is usually seen in young children and adolescents. The highest rates of disease are found in children aged 3 – 8 years.

Trachoma infection often spreads from child to child and from child to mother, especially where there are shortages of water, numerous flies, and crowded living conditions. Repeated episodes of infection can cause chronic inflammation. If left untreated this eventually causes the eyelids to scar, thicken and turn inwards so that the eyelashes then rub the front of the eye (trichiasis). This constant abrasion in turn, can cause irreversible corneal opacity and blindness.

Australia is the only developed country with blinding trachoma. Trachoma mainly occurs in remote and very remote Aboriginal communities in the Northern Territory, South Australia and Western Australia. In 2008, cases were also found in New South Wales and Queensland, where trachoma was believed to have been eliminated. From 2009 additional efforts have been made to improve eye and ear health services for Aboriginal and Torres Strait Islander peoples and Australia has made a commitment to the World Health Organisation Global Elimination of Trachoma by 2020 initiative. Six potentially at-risk communities were selected and screened as a mapping exercise in Queensland in 2012. No trachoma was reported in any of the six communities screened. Eight children found with trachoma-like follicles and their household contacts were treated.

**Signs and Symptoms:**

Trachoma infection can initially cause no symptoms or mild redness or discharge (conjunctivitis) which usually occurs 5-15 days after contact with an infected person. Diagnosis of trachoma is by clinical examination which shows pale round spots (follicles) or further changes on the inner surface of the upper eyelid.

Older adults with trichiasis often present with irritated watery eyes and if not recognized, referred and operated on, the trichiasis will lead to corneal scarring and blindness. Never give out soothing or lubricating eye drops without checking for inverted eyelashes (trichiasis).

Repeated infections, especially during childhood, may lead to scarring of the eyelid which can then cause the eyelashes to rub against the front of the eye (cornea). Scarring of the cornea can cause it to look white or milky and is irreversible. The condition of turned eyelashes is known as trichiasis and can lead to blindness if not corrected by surgery to prevent further damage.

**Treatment:**

Trachoma is usually treated by a single dose of a specific antibiotic. Cases of active trachoma and their contacts should be treated at the same time and advised about preventive measures such as face washing and household environmental measures. Trichiasis can lead to blindness. The best way to prevent this is surgery. Throughout Australia, Aboriginal and Torres Strait Islander adults over 40 years of age who resided in a remote community where trachoma was endemic during childhood should be examined for trichiasis each year by their primary health care provider either opportunistically or as part of their Health Check. Trichiasis screening should also be included in optometrist consultations. All cases of trichiasis need to be referred to an ophthalmologist. This referral should be at the earliest opportunity in order to preserve the person’s sight.

**Transmission:**
Children are the main reservoir of infection. They may be infectious to others while their eyes appear healthy. Trachoma is highly infectious in its early stage and may be infectious intermittently as long as active trachoma infection persists.

Ways the infection spreads include:

- Direct eye-to-eye spread such as while playing or sharing a bed
- Spread by fingers contaminated with eye and nose secretions
- Indirect spread through sharing items such as towels or face cloths, handkerchiefs or tissues, and pillow cases or other bedding
- By flies seeking the secretions and discharges from eyes
- Coughing and sneezing

**Prevention:**

Where the number of active cases of trachoma suggest local community transmission, health services should work with the community to undertake screening of 5 to 9 year old children and where warranted implement an education program as part of a holistic personal hygiene program, population level treatment, and environmental evaluation. There are no Queensland communities currently known to have active transmission of infection.

The key to the prevention and control of trachoma is implementation of the SAFE strategy:

S – Surgery for trichiasis: Surgical procedures to reduce the impact of trichiasis.

A – Antibiotics: Antibiotic (azithromycin) treatment of individual active trachoma cases and to reduce the community reservoir of infection.

F – Facial cleanliness: Promote clean faces to reduce spread of infection.

E – Environmental health: improve water access, good sanitation, waste and fly control, and reduce overcrowding.

The key messages of "Clean Faces, Strong Eyes" are:

- Everyone should wash their face and hands regularly, particularly children
- Faces can be washed in a small amount of water. A couple of handfuls of water, one to wash the eyes and surrounding area and the other to wash the hands and the rest of the face, are sufficient. The use of soap, although good, is not necessary
- A clean face does not have eye or nasal discharge, flies, dirt or crusting
- Wash blankets, clothes, pillows and towels to help stop spread in the house
- Encourage everyone who interacts with children to be involved: Clinic staff, teachers, aunts, uncles, grandparents.

**Help and assistance:**

For more information on trachoma, people can talk to:

- Local doctor
- Health worker
- Local optometrist
- Ophthalmologist

**References**

Trachoma Resource Book (2010)

