Trichiasis surgery: a patient-based approach

Wondu Alemayehu
Independent Consultant & General Manager, Berhan Public Health & Eye Care Consultancy.
Email: walemayehu@yahoo.com or walemayehu@berhan-health.org

Amir Bedri Kello
Senior Consultant, Light for the World.
Email: a.bedri@light-for-the-world.org or amirbedri@yahoo.com

Trachoma is the leading infectious cause of blindness worldwide. Corneal scarring, which causes trachoma-related blindness, occurs when the upper eyelashes are turned inward and rub on the eye (cornea). This is called trichiasis, and if the lid margin turns inward, the term entropion is used. Currently, there are an estimated 8.2 million people with trichiasis and 3.1 million people are blind from trachoma.

A systematic review of population-based trachoma surveys has shown that women are affected by trichiasis approximately twice as often as men. Trichiasis is more common with increasing age; however, in communities with very high levels of trachoma infection, trichiasis can occasionally occur in children.

Persons who develop trachomatous trichiasis (TT) usually need treatment to either surgically turn the eyelashes outward from the eye or to remove one or two in-turning eyelashes which are not central or touching the cornea; the latter is pulling out the in-turned lash or lashes with forceps, a procedure called epilation. Bilamellar tarsal rotation (BLTR) or posterior lamellar tarsal rotation (PLTR) are procedures widely used in trachoma endemic countries to surgically treat TT and are believed to produce comparable results.

In some countries, there are huge numbers of persons with untreated TT, often living in poor and remote communities. For example, in Ethiopia, there are an estimated 1.2 million people with TT who need an operation. However, the number of TT operations currently performed each year in Ethiopia is about 80,000. At this rate, it will take 15 years just to clear the backlog, without considering any new cases which will occur!

There are several reasons for the large numbers of untreated trichiasis patients in endemic countries:

- Patients may be unaware that surgery can help, or they may be afraid of an eye operation; as a result, uptake of TT surgery is often low, even when surgery is provided free of charge. Sometimes, the fear is reinforced by awareness in the community that, at a particular clinic, trichiasis often comes back after surgery, which has a negative impact on uptake.
- Some patients find the cost of travel to seek eye services, or the lack of a companion to go with them, to be a significant obstacle. This is particularly true for women who also have to look after children and the household and cannot afford the time to go for treatment. Sometimes, it is just too great a distance to a health facility, so people will not go for treatment.
- In some situations, services are simply not available, nobody has been trained to perform trichiasis surgery, or the necessary equipment and consumables are not available.

Strategies to address the TT backlog will vary from country to country and setting to setting.

These may include: creating awareness of treatment for trichiasis through health education, including radio programmes; ensuring TT surgery is available at low cost and close to where people with TT live; or conducting enhanced outreach in communities where trachoma is common.

TT surgery can be performed by well-trained ophthalmic nurses, assistants, or doctors. There is good evidence that TT surgery can be done by non-ophthalmologists with comparable results to those of ophthalmologists.

One of the challenges is to encourage the trained TT surgeon to continue to work in rural areas and to equip them so that they are able to perform sufficient TT operations per year to maintain good experience and quality.

Unfortunately, the quality of training of TT surgeons can be variable and adequate supervision may be lacking, leading to high rates of recurrence of TT after surgery. Surgeons who only do a small number of TT operations each month tend also to have poor surgical outcomes, leading to a vicious cycle of low uptake, low productivity, and poor surgical quality and outcome.

Breaking this cycle requires good planning and a willingness to acknowledge that results can be improved.

In order to develop a TT service, it is useful to address various levels of eye care delivery.

National level

- At a national level, it is necessary to identify areas with a high prevalence of TT and to prioritise these areas for TT surgery programmes.
- TT surgeons need to be given good quality training and be adequately equipped. Quality of care is essential. In order to improve the quality of surgery, training of TT surgeons should be standardised and surgeons should be certified using the World Health Organization manual on assessment of trichiasis surgeons.
- Due emphasis should be given to the selection of trainees, the creation of a career pathway, and supervision of TT surgeons.
- TT surgeons must also have adequate supplies of instruments and consumables.
- Services, whether static or outreach, that are staffed with poorly skilled, inadequately supervised TT surgeons can result in poor surgical outcomes and negative publicity for the programme.

District level

- At the health centre level, transport to provide outreach programmes for TT surgery in affected communities is required, together with good provision of consumables to perform the operation: medicines, sutures, dressings, and so on.
- It may be necessary, in some situations, to consider offering incentives (such as a financial reward) to encourage good TT surgeons to work in high-volume TT programmes in remote areas.

Community level

- At the community level, women must be specifically and deliberately targeted for trichiasis surgery. A successful
CONTINUING PROFESSIONAL DEVELOPMENT

CPD: Test yourself

These continuing professional development (CPD) Test Yourself questions are based on the contents of this issue. You can use the questions to test your own understanding; we hope that you will also discuss them with your colleagues and other members of the eye care team. The questions have been developed in association with the International Council of Ophthalmology (ICO) and are based on the style of the ICO Advanced Examination: www.icoexams.org/exams/advanced

1. Think about how to keep good nursing records. Which of the following statements are true and which are false?

<table>
<thead>
<tr>
<th>Statement</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. If you make an error in a patient’s nursing record, you can correct it using sticky labels or correction fluid.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Date and sign each entry, giving your first name.</td>
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<td></td>
</tr>
<tr>
<td>c. It is acceptable to use some abbreviations in the nursing record.</td>
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<td></td>
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<tr>
<td>d. It is better not to write opinions in the nursing record.</td>
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</tbody>
</table>

2. Think about managing patient records in the clinic. Which of the following statements are true and which are false?

<table>
<thead>
<tr>
<th>Statement</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Patient records must be kept safe because they could have commercial value.</td>
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<td></td>
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<tr>
<td>b. If you remove a patient file, leave a ‘taken by’ note with your name and location.</td>
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<tr>
<td>c. Electronic patient records are better than paper records.</td>
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<tr>
<td>d. It is up to individual eye units for how long they keep patient records.</td>
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3. Think about auditing to improve patient outcomes. Which of the following statements are true and which are false?

<table>
<thead>
<tr>
<th>Statement</th>
<th>True</th>
<th>False</th>
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</thead>
<tbody>
<tr>
<td>a. Auditing should not be used to find a guilty person and punish him or her.</td>
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<tr>
<td>b. Surgeons should receive regular feedback about the auditing results.</td>
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<tr>
<td>c. Don’t include patients in an audit if a good outcome is unlikely.</td>
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<tr>
<td>d. You should only collect the data you plan to analyse, not just as much data as possible.</td>
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</table>

4. Think about how to care for and clean optical surfaces. Which of the following statements are true and which are false?

<table>
<thead>
<tr>
<th>Statement</th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. All optical components should be cleaned regularly, whether or not they are visibly dirty.</td>
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<tr>
<td>b. Only some solutions are safe to use on plastic lenses.</td>
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</tr>
<tr>
<td>c. Cleaning solution can be applied directly onto the lens to be cleaned.</td>
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<td></td>
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<tr>
<td>d. The internal optics of laser machines can be handled by anyone who has read the instructions.</td>
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**ANSWERS**


In summary, it is essential to consider patients’ needs. This will require comprehensive planning at national, district, and community levels to adapt and strengthen the health system to meet these needs. The ultimate aim is for patients with TT to have successful surgery, be satisfied with the result, and be advocates in their communities. Only then will we achieve the ultimate goal of the elimination of blinding trachoma.

Further reading