

Dear trachoma colleagues,

Please find below a copy of the recent installment of the Trachoma Information Service, prepared by Dr. Muluken Melese in Ethiopia. As noted by Muluken, and many colleagues, failure and recurrence following trichiasis surgery is higher than desired. We do not know all of the reasons for failure or recurrence but the Ethiopian study makes it clear that trained integrated health workers can achieve results as good as those achieved by ophthalmologists. Further research is needed and patients need to be aware that failure and recurrence are common events. We hope you find the article of interest. Please feel free to contact Muluken if you would like further information on their paper.

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Surgery for trichiasis by ophthalmologists versus integrated eye care workers

A Randomized Trial

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Abstract

OBJECTIVE: To study the outcome of bilamellar tarsal rotation (BTR) trichiasis surgery performed by ophthalmologists versus that done by integrated eye care workers (IECWs). **DESIGN:** Randomized prospective interventional trial. **PARTICIPANTS:** Nine hundred eighty-two patients with various degrees of trichomatous trichiasis in central Ethiopia. **METHODS:** Trichomatous trichiasis patients in 3 woredas (districts) in central Ethiopia were enrolled. Trichiasis severity was graded. Patients were randomly assigned to surgery by 2 ophthalmologists and 2 IECWs. On the seventh day postoperatively, patients were evaluated for undercorrection or other complications. If trichiasis was present, it was considered a failure of surgery (technical failure), and patients were excluded from the follow-up study, but repeat surgery was performed. Those patients with good correction at the seventh day were examined again on the third and sixth months. Further follow-up evaluation is planned for the first, second, and third years postoperatively. **MAIN OUTCOME MEASURES:** Recurrence rate, recurrence difference in the various grades, and difference between surgeries done by ophthalmic surgeons and those done by IECWs. **RESULTS:** In the third month of follow-up, it was possible to locate 713 (73.0%) of the operated patients. Eighty-one of 713 (11.4%) individuals and 94 of 1286 (5.4%) operated lids developed recurrent trichiasis in this period. There was a linear trend of recurrence with grading (severity) at baseline ($\chi^2 = 22.017$, $P < 0.001$), but there

was no difference in recurrence by age ($\chi^2 = 1.53$, $P = 0.9$ at the third month; $\chi^2 = 1.43$, $P = 0.9$ at the sixth month). There was also no difference with regard to gender ($0.38 < \text{odds ratio} < 1.14$, $P = 0.1$). The recurrence observed in the group of individuals operated on by ophthalmologists at the 3-month follow-up was 47 (12.1%) lids, and the recurrence observed in the group operated on by the IECWs was 34 (9.9%) lids, with no statistically significant difference ($\chi^2 = 1.38$, $P = 0.24$, 95% confidence interval [CI], -18% to 74%). At the 6-month follow-up, 43 (6.2%) persons had recurrence (95% CI, 4.4%-8%). There was no statistically significant difference between the 2 groups of surgeons at the 6-month point of follow-up examination ($\chi^2 = 4.46$, $P = 0.2$). The overall recurrence was 124 (14.3%) lids within the first 6 months. **CONCLUSION:** Recurrent trichiasis is common, especially in cases where the degree of trichiasis is severe at baseline. This suggests that these patients may need surgical overcorrection to decrease the recurrence rate. The outcome of BTR surgery done by IECWs is similar to that of the ophthalmic surgeons. Because of these findings, we recommend that training of IECWs in trichiasis surgery may help to ameliorate the effects of the eye care worker shortage in developing countries.

Synopsis prepared by : Dr. Muluken Melese (mulukenm@telecom.net.et)

Trachoma is the second leading cause of blindness worldwide. Repeated inflammation of the conjunctivae results in scarring, which ultimately leads to trichiasis/entropion. Surgery is the recommended mode of treatment, but the recurrence is high. In developing countries there is a severe shortage of eye care workers to do the surgery, especially among the rural population. ORBIS with MoH of Ethiopia designed a one month programme to train nurses as Integrated Eye Care Workers (IECWs) on primary eye care including trichiasis surgery (Bilamellar Tarsal Rotation). Followed the training we sought to determine the quality of surgery prior to expanding the training programme. The other question we sought to answer was who, among trichiasis patients, developed recurrence. In a separate study we developed a modified grading of trichiasis/entropion from simple to severe stages, which was important for recurrence and for patient management (Melese et al. Modified grading of trichomatous trichiasis. *Ophthalmic Epidemiology* 2003; 10:75-80). This study was designed to test the quality of surgery by IECWs and the recurrence level of trichiasis with the modified grading.

Nine hundred eighty trichomatous trichiasis patients in three woredas (districts) in central Ethiopia were enrolled. Trichiasis severity was graded. Patients were randomly assigned to surgery by 2 ophthalmologists and 2 integrated eye care workers. The recurrence rate at the 3 month follow-up was 11.4% and at the 6 months follow-up it was 6.2% of the persons. There was no statistical significant difference in recurrence between the ophthalmologist and IECWs groups. There was a linear trend of recurrence with grading (severity) at baseline ($\chi^2 = 22.017$; $P < 0.001$). The overall recurrence was 14.3%.

What is the take-home message : The recurrence of trichiasis is high for baseline severe grades of trichiasis. The outcome of BTR surgery done by IECWs is similar to that of the ophthalmic surgeons. IECWs can fill the gap of trichiasis surgeons in developing countries.