

Prevalence of Trachoma-Related Trichiasis and Corneal Opacity in Rural Myanmar

The Meiktila Eye Study

Shane R. Durkin, MPH¹, Robert J. Casson, DPhil, FRANZCO,¹ Henry S. Newland, MPH, FRANZCO,¹ Than H. Aung, MMedSc,² Win K. Shein, MB, BS,³ James S. Muecke, FRANZCO,¹ Dinesh Selva, FRACS, FRANZCO,¹ Than Aung, MD²

Objective: To describe the prevalence of trichomatous trichiasis and corneal opacity (CO) within central Myanmar.

Design: Population-based cross-sectional ophthalmic survey.

Participants: Random, stratified, cluster sampling of the inhabitants ≥ 40 years of age from villages in the Meiktila District was performed; 2481 eligible participants were identified and 2076 participated in the study.

Methods: Visual acuity was measured using an E Snellen chart at 6 meters. Lid, ocular surface, and anterior segment examinations were performed at the slit lamp.

Main Outcome Measures: Trachoma was graded as trichomatous trichiasis (TT) or CO according to the World Health Organization grading system.

Results: The population prevalence of trachoma (TT and CO) was 2.6% (95% confidence interval [CI], 1.67%–3.42%). For every 1-year increase in age, the odds of trachoma increased by 5.3% (95% CI, 4.9%–5.7%). There was no significant effect of gender on the prevalence of trachoma ($P = 0.5$). No formal schooling was a strong predictor of trachoma (odds ratio, [OR], 4.9; 95% CI, 3.9–6.1), and having < 3 children in the house was protective (OR, 0.75; 95% CI, 0.61–0.93); however, neither occupation nor the number of people in a household had an effect on trachoma.

Conclusions: The prevalence of blinding trachoma in central Myanmar remains relatively low. This is a tribute to the success of the Burma Trachoma Control Program and demonstrates the need for such a program to remain an integral part of public health care and community health services to further diminish the prevalence of this condition. This will be facilitated by a focus on trachoma risk factors and further research into the prevalence of inflammatory trachoma within the pediatric population. *Ophthalmology* 2007;114:e7–e11 © 2007 by the American Academy of Ophthalmology.

Trachoma has been a major cause of blindness for many centuries. It has led to conjunctivitis, cicatricial lid changes, and corneal opacity (CO) among populations who have been socioeconomically disadvantaged and those who have been exposed to hot, dry, and dusty environments without adequate access to water and facial hygiene. Although its prevalence in certain areas is declining, trachoma continues

to account for at least 3.6% of world blindness,^{1,2} making it one of the leading causes of preventable blindness.

Myanmar has had a Trachoma Control Program (TCP) in operation since 1964.³ This initially involved the surgical correction of trichiasis,⁴ but has since evolved to incorporate all aspects of the World Health Organization (WHO) Surgery, Antibiotics, Facial Hygiene, Environmental change strategy.⁵ The Surgery, Antibiotics, Facial Cleanliness, Environmental change strategy not only has proven effective in reducing the prevalence of active infection and potentially blinding trachoma-related trichiasis and CO, but also has been accompanied by a decline in the incidence of trachoma-related blindness and visual impairment.^{3,6} To monitor for the presence of active infection or lid-scarring disease, the WHO simplified grading system has been widely used and over the last 2 decades has demonstrated good inter- and intraobserver reliability.⁷

Although there is anecdotal evidence to suggest that the prevalence of trachoma over the past 3 decades has declined in Myanmar, to date there have been no robust epidemiologic data to confirm this impression. Accurate epidemio-

Originally received: August 16, 2006.

Accepted: January 16, 2006.

Manuscript no. 2006-916.

¹ South Australian Institute of Ophthalmology, Adelaide, Australia.

² Yangon Eye Hospital, Yangon, Myanmar.

³ Meiktila Eye Hospital and Trachoma Control and Prevention of Blindness Program, Meiktila, Myanmar.

The authors are aware of no conflicts of interest, of any nature, pertaining to the article. The survey was funded by a grant from Pfizer Australia, West Ryde, Australia, but the design of the survey and its execution, analysis, interpretation, and publication were carried out independently by the authors.

Correspondence to Dr Shane R. Durkin, South Australian Institute of Ophthalmology, Royal Adelaide Hospital, North Terrace, Adelaide, South Australia 5000, Australia. E-mail: shane_durkin@yahoo.com.