

Original Article

Prevalence of trachoma and diabetes-related eye disease among a cohort of adult Aboriginal patients screened over the period 1999–2004 in remote South Australia

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ABSTRACT

Background: To determine the prevalence of trachoma and diabetes-related eye disease within the adult Aboriginal population screened by the South Australian Eye Health Program between 1999 and 2004 inclusive.

Methods: The South Australian Eye Health Program visited 22 Aboriginal communities in remote South Australia. Visiting ophthalmologists and optometrists systematically collected data on the cohort of adult patients seen over the period 1999–2004. Prevalence and grade of trachoma according to World Health Organization classification and the prevalence and degree of diabetic retinopathy according to the Early Treatment Diabetic Retinopathy Study and National Health and Medical Research Council guidelines were recorded.

Results: A population of 1651 Aboriginal patients was examined. Sixty-two per cent were female and 38% were male. Twenty patients (1.2%) had evidence of active trachoma with 260 (15.7%) patients having either lid scarring, trichiasis or corneal opacity. There was no significant association between gender and the prevalence of trachoma ($P = 0.48$). Seven hundred and seventy-one patients within the examined population had diabetes mellitus (46.70%). Significantly more women than men were affected and prevalence increased with age ($P < 0.0001$). One hundred and sixty-nine patients (22%) with diabetes mellitus had features of diabetic retinopathy, and of these patients 77 had background diabetic retinopathy (46%) and 92 (54%) had either proliferative diabetic retinopathy or maculopathy.

Prevalence of clinically significant macula oedema among those with maculopathy (14 of 50 patients) was 28%.

Conclusions: The data suggest that although trachoma is still endemic in this South Australian Aboriginal population the prevalence and severity are less than previously reported. Diabetes mellitus has a high prevalence within this population and great potential for detrimental visual sequelae.

Key words: Aboriginal, diabetes, prevalence, retinopathy, trachoma.

INTRODUCTION

Trachoma and diabetic retinopathy (DR) continue to contribute significantly to the global burden of blindness. Ocular infection with chlamydia trachomatis and its resultant cicatricial changes account for at least 3% of worldwide blindness,¹ making it one of the frequent causes of preventable blindness. Similarly, there is an emerging global epidemic of diabetes mellitus (DM): developed countries already face an adult prevalence of around 5%,² leading to an expected doubling of the number of people needing screening and treatment for diabetic eye disease in the next 20 years.³

In Australia, the contribution of trachoma to blindness is relatively low;⁴ however, it continues to contribute significantly to ocular morbidity within the Aboriginal population.⁵ Caused by the A, B, Ba and C serotypes of *Chlamydia trachomatis*, trachoma manifests in five clinical stages that lead to blindness through corneal opacity. The World Health Organization (WHO) Simplified Grading System has been widely used to describe these stages and over the last several

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