



Microbial keratitis—the true costs of a silent pandemic?

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Microbial keratitis (MK) remains one of the leading causes of unilateral blindness across all ages worldwide [1]. MK is an ophthalmic emergency that often results in an in-patient admission, and in the UK in England alone, there are over 2700 in-patient hospital episodes with suspected corneal infection [2]. Globally, we know that, despite advances in management, MK cases are rising [3]. Some have termed this as the 'Silent Epidemic' [1]. We often think of this condition related to the economic deprivation of a country [4], but the disease frequently occurs in the developed world [3].

The 'true' incidence of MK world-wide remains limited because of the unilateral nature of visual impairment and lack of a system of reporting cases [1]. This is an issue in both the developing and developed world what we know from where the epidemiology has been studied, that in the developing world cases exceed 2 million cases per year worldwide. Whitcher and Srinivasan estimate there are over 800,000 cases of MK per year in India alone [1]. Studies in the developed world done in the 1990s show that in California, MK has an incidence of 27.6 per 100,000 person-years overall with 130.4 cases per 100,000 person-years occurring in the contact lens-wear population [5]. Similar studies from the United Kingdom, provide incidence between 3.6 per 100,000 and 40.3 per 100,000 [6, 7].

Despite some knowledge of the incidence, the costs of MK to healthcare and individuals are more elusive. In the US health care system MK is estimated to cost 175 million dollars in direct health expenditures and approximately 70 million dollars in Medicare and Medicaid related costs per year [2, 3].

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In this issue, Moussa et al. [2] show a detailed analysis in the UK, that there is a high direct healthcare economic costs from MK. In their patient cohort, they show that on average, the mean expenditure is approximately £3600 per in-patient admission with an average length of in-patient stay 2 to 3 days. By analysing and extrapolating NHS England data on hospital episodes, they calculate that costs to the NHS are approximately £2.8 million per annum in England alone. The study also shows that the costs are higher in patients who come from more deprived backgrounds [2].

Moussa et al. have focused solely on the hospital episode and in-patient admissions [2]. As clinicians, we are aware that there are larger group who are not admitted. Also there are broader socio-economic costs with MK and associated socio-economic losses for the patient from lost earnings, productivity, inability to drive, morbidity from persistent ocular symptoms such as ocular pain and photosensitivity. In addition, in the acute stage of the disease, patients have to frequently use of eye drops and attend eye clinics with loss of time and drug costs. Moreover, we know that many patients require surgical interventions such as corneal transplantation or aminotic grafting [8].

Some inference on the socio-economic costs to patients with MK can be made from overall NHS litigation claims. Over a recent 5-year period, Ophthalmology litigation claims to the UK NHS were £168 million, there are a significant number of these claims which can be attributable to MK cases [9]. In developing world, it is likely that the socio-economic costs are relatively higher as the age profile of MK in many parts of the world, disproportionately affects individuals in the most economically active periods of their life [10].

It is a shame that despite our knowledge of the epidemiology and economics of blindness, we still appreciate very little on the impact of MK and the subsequent unilateral visual loss. With millions of people affected by MK in the world, there is a need for studies that show the up-to-date psychological and economic impact of corneal infection. Specialists working in this field, in both developed and developing nations, know that we are underestimating the 'true costs' of this ubiquitous condition.

Compliance with ethical standards

Conflict of interest The author declares no conflict of interest.

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