

Research Letter

Cutaneous leishmaniasis and health-related quality of life in returning travellers to the UK

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Cutaneous leishmaniasis (CL) is associated with psychological morbidity and reduced health-related quality of life (HRQoL) in endemic countries.¹ Although CL is also reported in travellers,^{2,3} there is little information on the impact of CL on HRQoL in this population. The Dermatology Life Quality Index (DLQI) questionnaire was used to measure the impact on CL on HRQoL in returning travellers.

The DLQI is a widely used questionnaire in dermatology, comprising 10 questions on symptoms and feelings, daily activities, leisure, work and school, personal relationships and treatment. Individuals rate the impact of their dermatological condition over the past week as ‘not at all’, ‘a little’, ‘a lot’ or ‘very much’ for each domain. The scores to each question are added, giving a total score from 0 to 30 (maximum impairment of quality of life).⁴

We conducted a retrospective cohort study of returning travellers diagnosed with CL seen at the Hospital for Tropical Diseases, London, UK, between 1 March 2018 and 30 June 2020. Patient demographics, disease characteristics and DLQI scores were summarized using descriptive statistics. Diagnosis was confirmed using skin biopsy, with visualization of amastigotes by microscopy-culture and/or polymerase chain reaction (PCR). We excluded individuals with mucosal or mucocutaneous leishmaniasis.

Fifty-eight individuals with CL were eligible for inclusion. The majority were male (67%) and their age ranged between 2 to 76 years [median 37.0 years, interquartile range (IQR) 29.5]. No individuals were human immunodeficiency virus infected but one patient was immunosuppressed. The majority of individuals ($n = 39$, 67%) had a single lesion, 10 (17%) had two lesions and

nine (16%) had three or more lesions. Lesions were distributed on the upper limb ($n = 22$, 38%), lower limb ($n = 22$, 38%), head and neck ($n = 19$, 33%), and other sites ($n = 5$, 9%). The size of skin lesions ranged between 0.5 cm to 11 cm. The causative species identified using PCR were *L. Viannia* subgenus in 32 individuals (55%), *L. donovani* complex in 12 (21%), *L. major* in eight individuals, *L. mexicana* in two, *L. tropica* in two and unknown species in two. The likely regions of acquisition were the Americas ($n = 35$, 60%), Europe ($n = 10$), Middle East ($n = 8$), Africa ($n = 4$) and South Asia ($n = 1$).

DLQI data were available for 46 adults (79%). The median age was 37.0 years (IQR 29.5) and 63% were male. The mean total DLQI score was 7.3 (SD 4.6, minimum 0, maximum 20), corresponding to a moderate effect on HRQoL.⁵ Of these, the disease had no effect on quality of life in four individuals (9%), a small effect in 13 (28%), moderate effect in 18 (39%), and very large effect in 11 (24%). The highest effects were observed on the physical symptoms and feelings, work and school, and leisure domains. The lowest effects were in the daily activities and personal relationships domains. No significant difference was observed with respect to age, gender, size or number of lesions present. This may be due to the small numbers in this cohort.

In the present study, 63% of patients reported a moderate or higher impact on their quality of life. These results are similar to data from endemic countries.^{6–8} Studies in Brazil and Iran found that 70% and 43% of CL patients, respectively, had a moderate or high impact on their HRQoL using the DLQI.^{7,8} The ‘symptoms and feelings’ and ‘work and school’ domains were the most affected, as in our study.^{7,8} A case-control study in Turkey showed higher levels of depression and anxiety and lower quality

of life in patients with CL compared to controls. Lesions and scars on visible areas, such as the face and hands, and in younger patients, seem to lead to a greater negative impact.^{4,6} Ulcerated lesions were associated with greater effect on HRQoL.⁷

Our small retrospective study suggests that CL diagnosed in non-endemic settings is associated with a similar reduction in HRQoL to that reported in affected individuals in endemic settings. However, further work is required to examine the long-term impact of CL on HRQoL in both types of settings particularly where access to timely and effective therapy is difficult.

Authors' contributions

EP did the literature search, design, data analysis and manuscript writing. SW did the literature search, design and manuscript writing.

Conflict of interest

None declared.

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References

1. Pires M, Wright B, Kaye PM *et al.* The impact of leishmaniasis on mental health and psychosocial well-being: a systematic review. *PLoS One* 2019; **14**:e0223313.
2. Boggild AK, Caumes E, Grobusch MP *et al.* Cutaneous and mucocutaneous leishmaniasis in travellers and migrants: a 20-year GeoSentinel surveillance network analysis. *J Travel Med* 2019; **26**: taz055.
3. Blum J, Buffet P, Visser L *et al.* LeishMan recommendations for treatment of cutaneous and mucosal Leishmaniasis in Travelers, 2014. *J Travel Med* 2014; **21**:116–29.
4. Finlay AY, Khan GK. Dermatology life quality index (DLQI)—a simple practical measure for routine clinical use. *Clin Exp Dermatol* 1994; **19**:210–6.
5. Hongbo Y, Thomas CL, Harrison MA *et al.* Translating the science of quality of life into practice: what do dermatology life quality index scores mean? *J Invest Dermatol* 2005; **125**:659–64.
6. Yanik M, Gurel MS, Simsek Z, Kati M. The psychological impact of cutaneous leishmaniasis. *Clin Exp Dermatol* 2004; **29**: 464–7.
7. Toledo AC Jr, da Silva RE, Carmo RF *et al.* Assessment of the quality of life of patients with cutaneous leishmaniasis in Belo Horizonte, Brazil, 2009–2010. A pilot study. *Trans R Soc Trop Med Hyg* 2013; **107**:335–6.
8. Vares B, Mohseni M, Heshmatkhah A *et al.* Quality of life in patients with cutaneous leishmaniasis. *Arch Iran Med* 2013; **16**:474–7.