

## EDITORIAL COMMENTARY

### BURULI ULCER DISEASE

Buruli ulcer is a disease that affects the skin and subcutaneous tissues. It is caused by an environmental pathogen, *Mycobacterium ulcerans*, that produces a toxin, mycolactone, now known to be responsible for the extensive debilitating late lesions. Early lesions include nodules, papules or raised plaques distributed mainly on the limbs and trunk. These lesions subsequently develop into ulcers which if left untreated may result in amputation, contracture deformities, significant disability and sepsis. About a quarter of patients develop permanent disability. The cost of clinical management is quite high.<sup>1</sup>

The disease is associated with marshes and wetlands and is found in many African countries. It is also well known in Australia. The main burden of the disease is in children in sub-Saharan Africa although adults also get infected. In Ghana the disease has been reported in all the ten regions of the country. The disease has also been fairly studied in terms of epidemiology, clinical management and pathogenesis but there remains major untravelling factors in the control of the disease. Two of these major factors include the availability of simple to use diagnostic tools for disease detection in the early phase of the disease, when antibiotic treatment produces very good responses<sup>2</sup> and the elucidation of the mode of transmission (of the disease).

In this issue of the journal Adu E *et al.*, publish their findings on the clinical epidemiology of *M. ulcerans* disease in an endemic region of Ghana.<sup>3</sup> The paper presents data on the various treatment options including the effect of antibiotic treatment of early and late lesions in combination with surgery. It highlights the importance of early recognition and appropriate treatment of *M. ulcerans* disease and the role of antibiotic treatment.

Wilson MD *et al.*, argue in this issue of the journal<sup>4</sup> that *Acanthamoeba* species are the natural hosts of *M. ulcerans* and responsible for its transmission. Because of the association of *M. ulcerans* with marshy areas

and wetlands it has been identified in aquatic insects, snails, small fish and biofilms of aquatic plants using polymerase chain reactions. Various mechanisms have been postulated for the transmission cycle including passage through the salivary glands of aquatic insects.

While searching for early diagnostic tools and effective treatment chemotherapy it is important that the search for the agents responsible for the transmission of *M. ulcerans* disease be intensified. It is only when the transmission cycle is known with certainty that appropriate public health interventions can be designed and implemented to reduce the burden of the disease.

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