EDITORIAL

Melioidosis in the non-endemic setting: Not only in diabetic travelers returning from Southeast Asia

Melioidosis, caused by the Gram-negative environmental bacterium *Burkholderia pseudomallei*, has been first described in 1911 in Myanmar. While predominantly prevalent in Southeast Asia and Northern Australia, there is increasing evidence that its distribution in tropical areas is much larger than previously thought [1,2]. If Western infectious disease specialists were asked to provide snapshot information on this rare condition, those most informed would probably answer that it sporadically affects travelers, mainly those with underlying illness (in particular diabetes mellitus) after environmental exposure in Southeast Asia, and that the disease may have various, often severe, manifestations and requires a rather complex and prolonged treatment. For first-line practitioners, the variety of clinical presentations - from skin infection to fulminating sepsis - and the particular antibiotic susceptibility pattern make this disease particularly challenging. Even in high resource settings, where blood and other bacterial cultures are within reach for all severely ill patients, diagnosis is not always straightforward, delaying appropriate management [3].

In the most recent GeoSentinel survey, melioidosis was diagnosed in 9 of 42,173 ill travelers (0.02%) but accounted for 2 of the 28 (7%) reported deaths [4]. The occurrence of a rare exotic disease with a high fatality rate is probably the most feared situation in clinics and hospitals attending large numbers of international travelers. Besides *P. falciparum* malaria, tropical diseases that may cause abrupt clinical deterioration are very diverse but rather infrequent. Melioidosis is definitely one of those conditions travel physicians would avoid to miss at all price. The comprehensive review by Saidani N et al. in this Journal issue [5] of all published cases of travel-associated melioidosis is a timely reminder that the epidemiological and clinical approach of this condition becomes increasingly complex.

As fairly acknowledged by the authors, compiling cases from the literature has serious limitations when one aims to describe the features of a given disease since information is often heterogeneous, incomplete and skewed to the most severe and/or atypical presentations. Also, cases emerging in travelers or migrants after a very remote exposure could not be retrieved in this search. However, several findings challenge our classic knowledge. First, one third of the cases were not acquired in Southeast Asia, but in the Indian subcontinent, Latin America, the Caribbean or Africa. Second, no underlying disease was found in at least 30% of the patients, and diabetes was present in less than half of the cases. It is not excluded however that some more occult co-morbidities such as alcoholism, thalassemia or neutrophil dysfunction disorders have been missed. Likewise, clear environmental exposure was mentioned in less than 50% of the reports, which probably highlights large differences in environmental ‘bacterial load’ and subsequent inoculum after accidental contact. In addition, blood culture - the most common diagnostic mean - was positive in only half of the patients. More strikingly, this review confirms a case fatality rate of 15% (up to 25% in bacteremic cases), similar to that observed in large Australian series, and this is probably among the highest that may be seen for a given disease in returning travelers. Finally, international therapeutic recommendations were complied with in only 70% and 50% of the cases for the acute and eradication phases respectively, despite the substantial risk of late relapse if treatment is not adequate.

For the clinician, the main message is that a high index of suspicion is needed for melioidosis in any febrile traveler particularly if presenting with severe pneumonia, sepsis, meningitis or deep organ abscesses, and especially, but not exclusively, if there is an underlying immunosuppressive condition or a history of environmental exposure. In such cases, ceftazidime or meropenem should be added to the

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empirical therapy until the bacteriological results are available, since the commonly used antibiotics for those various presenting syndromes often do not have sufficient activity against B. pseudomallei [2]. This review provides also an additional illustration that international travelers play an invaluable role as sentinel even for the most exotic infectious diseases.

Conflict of interest

The authors have no conflict of interest related to the present article.

References


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