Reviewer's report

**Title:** Emergence of sporadic non-clustered cases of hospital-associated listeriosis among immunocompromised adults in southern Taiwan from 1992-2013: effect of precipitating immunosuppressive agents

**Version:** 2  
**Date:** 27 January 2014

**Reviewer:** David Banach

**Reviewer's report:**

This is a retrospective descriptive analysis of non-clustered cases of listeriosis among patients in southern Taiwan. Due to its relative rarity, collective data on cases of listeriosis is limited and this study has a relatively large number of cases to add to the medical literature. This data suggests that a minority, though substantial, number of cases of listeriosis may be diagnosed during hospitalization or after hospital discharge.

**Major Compulsory Revisions**

No abstract was received for this manuscript though it is unclear whether one was submitted by the authors.

There is a relatively small literature on hospital-associated listeriosis outside the outbreak setting. The authors define hospital-associated cases of listeriosis as those whose symptoms develop > 48 hours after admission or within 14 days after discharge for another condition. One difficult aspect with this terminology would be determining that these cases were truly symptoms that developed after admission rather than patients who presented with listeriosis but whose diagnosis was delayed beyond 48 hours after admission. For the 12 cases that were considered hospital-associated I would be interested in learning more about how these patients initially presented and their diagnosis at admission if this information is available.

If available, it would be helpful to describe the immunosuppressive agents associated with these cases. If the authors could categorize these agents into groups – for example how many patients were taking corticosteroids, how many were on chemotherapy, other immunosuppressants this would be helpful in further understanding the epidemiology and predisposing risk factors for listeriosis.

It is interesting to note that the hospital associated cases were more likely to have received immunosuppression within the 4 weeks prior to the onset of symptoms. Rather than identifying these cases as hospital-associated, the alternative explanation may be that these cases tended to present with symptoms in a protracted manner and were diagnosed later in the hospital course. A delayed diagnosis of CNS listeriosis may also explain why these patients were sicker and had a poorer prognosis in terms of mortality and
hospitalization duration. This should be added as a potential limitation to interpreting the results.

The conclusion states that “It is likely that the incidence of this disease will increase in association with the development and widespread use of new and more potent immunosuppressants”. While this may be true, this conclusion may be somewhat overreaching based on the data presented. This statement would depend on the type of immunosuppression and the risk of listeriosis associated with different immunosuppressive agents. One may argue that as we move away from certain agents such as corticosteroids and more towards focused immunosuppression there may be less listeriosis.

Minor compulsory revisions

APACHE score was identified as a risk factor for mortality among all patients with listeriosis and is included in Table 2. Please clarify whether this APACHE score was at the time of admission or at the time of diagnosis of listeriosis.

Please also clarify whether the other symptoms/labs listed in table 2 were at the time of admission or at the time of diagnosis of listeriosis, as the healthcare-associated patients were not diagnosed with listeriosis until days after admission.

In the fifth sentence of the discussion section the authors state that “In the present study 32 of 35 healthcare associated cases were immunocompromised”. It seems like the 35 cases encompass both healthcare and community associated cases. Please clarify.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.