Reviewer’s report

Title: Epidemiological and Clinical Features of Human Rabies Cases in Bali 2008-2010

Version: 2 Date: 22 October 2011

Reviewer: Sirenda VONG

Reviewer’s report:

To my knowledge this manuscript is the first scientific report of the recent rabies outbreak in Bali and should be considered for publication in BMC ID. In addition, introduction of rabies in formerly rabies-free area is rarely documented. However, there are rooms for improvement to make the paper more pertinent for international readers. The major comment is the lack of background epidemiological data on the outbreak to put these described cases into perspective.

• Major Compulsory Revisions

1) Abstract:

1.2. Proportion of paralytic forms is an important information and should be highlighted and incorporated in the abstract

1.3. last sentence in conclusion mentions lack of awareness and absence of RIG; the authors should include low vaccination rate & absence of RIG following dog bites as a whole

2) Background:

- has there been any data on the number of dog bites in 2008 or 2007, just to compare with that of 2009 and 2010. Is the increase between 2009 and 2010 to do with enhanced surveillance and recording? Otherwise I don’t understand the pertinence of this data?

3) Methods:

3.1 to better perceive the scale of rabies, the authors should better describe the surveillance system and the health care system in Bali: how patients were detected, whether the hospitals they mentioned were referral hospitals and the only places where cases could be detected? Is there a possibility that cases were missed by the health authorities; Any possibilities that cases were not recognized because they died at home without being hospitalized?

3.1 bis. Also a presentation of Bali would be helpful: population size..

3.2. please also mentioned how doctors were informed of rabies at the initial phase of the outbreak: any training? Any case definitions? Were cases not diagnosed due to the lack of awareness among clinicians?

3.3. Detailed description of the methodology of this study: when was it
implemented? How were data collected? Probably retrospectively, please tell. Were there any data extractions from Medical charts? How were data related to clinical history collected, particularly among patients with agitation or confusion? When was PCR introduced? Which methods were used to diagnosed rabies before PCR: clinical or FAT?

3.4. Was PCR testing coupled with FAT?

4) Results:

4.1. Some interesting analyses are missing here; I would encourage the authors to further them if possible:

- the authors should provide an epidemiological curve of these cases
- some data to illustrate why 8 patients had no reports of dog bite: other animal bites, absence of data, relatives did not remember…etc?
- please compare differences with available collected variables between PCR pos and PCR neg patients
- please describe thoroughly patients who died although they received incomplete vaccination regimen: incubation period, disease onset and time of vaccination shots, potential reasons why vaccination was incomplete, types and location of wounds…etc
- please describe epidemiological (demographics, incubation, types of wounds..etc) differences between furious and paralytic forms
- the authors mentioned 21% of flaccid paralysis among paralytic forms, please describe the remaining 79%
- the authors should better describe health seeking behaviors of these patients, before they end up at the hospital with more specific symptoms of rabies
- PCR could be interesting in ante-mortem diagnosis, please describe with details these cases and if possible compare with those with negative results

5) Discussion:

5.1. Better sense of the context re the outbreak is needed: how representative are these cases of all the recorded cases. Was it possible that the first cases were missed? I'm still left with a sense that some cases were missed because they did not present with classic symptoms of rabies. Would some comatose patients have died without classic rabies related symptoms? What were the main symptoms that made clinicians think of rabies and request testing? Please discuss these points

5.2. The first paragraph of the discussion is extremely important; however, lacks details. As mentioned above a better description of the initial circumstances of the epidemic and the response at the hospital and the health department levels would help put the present study into perspective. The authors should highlight the lessons learned during this period

5.3. Please explain why hospitals chose to implement PCR while FAT and clinical case definitions would probably be sufficient and less costly?

5.4. When PCR is used and sequencing done, could the authors tell us more
about the origin of this epidemic? Was it a unique source? Or any investigations done to trace back to a potential source?

5.5. Did the authors attempt to test in urine by PCR?

5.6. In my opinion, the last paragraphs of the discussion on prevention and control are too banal. If the strategy of the health authorities is to just control rabies in Bali, I would chose to inform the readers about the reasons why the authorities have not decided to embark into eliminating rabies from the island?

Tables and figures:

Data in table 1 should be displayed on a map. If possible include incidence and potential clusters

• Minor Essential Revisions

1) Abstract:
1.1. Typo error: read
- "Estimated time from" instead of form
- Prodromal symptoms were recorded "in or for"

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests