Reviewer’s report

Title: Three-year survival and recurrence after first-ever stroke: The Joinville Stroke Registry

Version: 1  Date: 25 January 2015

Reviewer: JInghua Wang

Reviewer’s report:

Major Compulsory Revisions:
The authors presented the results of stroke outcomes from a population-based stroke registry in Joinville, Southern Brazil. They assessed the mortality and recurrence rate at 3 years after stroke, and conclude that compared to other high-income countries, the recurrence rates and 3-year risk of death in this study were similar. But there was a higher risk of death in CE.

1. Title:
I would suggest the authors to modify the title in order to better reflect the study results, just focus on the outcome, which included death and recurrence.

2. Background:
The latest report demonstrated that stroke is the second most common cause of death and the third most common cause of disability-adjusted life-years (DALYs) worldwide in 2010 [1,2]. I recommended authors to replace this section in line 34, 35 on page 2.

References:


3. Methods:
(1) How to ensure the quality of the data? Were all researchers included 3 nurses and the neurologist who contributed to the clinical examined and imaging confirmed trained before the research beginning?

(2) The author mentioned that between line 24 to line 26 on page 3 “Every week the state-run health units searched their electronic records for any stroke-related diagnoses listed in the ICD-10. This happened monthly at the institutional care facility.” How about the private units?

(3) What is the meaning of the sentence “However, not all patients identified
agreed to be admitted. Such patients were offered an appointment as outpatient.”

in line 26, and 27 on page 3?

(4) The authors stated the resources of stroke events, including hospital and
private clinic, but what happened with stroke cases experienced by individuals
who did not seek medical attention? Were they censored?

(5) Were patients with history of transient ischemic attack who had a subsequent
stroke regarded as incident or recurrent strokes?

(6) Were those patients without a clinical history of stroke but with an evident
chronic in neuroimaging studies regarded as first ever or recurrent events?

(7) Were patients with transient focal symptoms and a cerebral infarction in
neuroimaging studies regarded stroke or TIA cases?

4. Results:

(1) I would suggest that the results revolve around the death and recurrence,
analyze the mortality and recurrence rate by three categories: overall, stroke
types (IS, HS, SAH), and subtypes of IS (LAA, CE, SAO, OD, UND). Details are
as follows:

(2) I suggest that delete the Figure 2,3,4, display these contents in Table 2.

Table 2: Kaplan-Meier estimates of the risk of recurrence within defined time
intervals after the index stroke

Categories 1 day to 30 days 1 to 6 months 6 m to 1 year 1-2 years 2 - 3 years

Overall:
Rate(95%CI)
Cumulative risk ( CI 95%)

Stroke types:
IS:
Rate(95%CI)
Cumulative risk ( CI 95%)

PIH:
Rate(95%CI)
Cumulative risk ( CI 95%)

SAH:
Rate(95%CI)
Cumulative risk ( CI 95%)

Subtypes of IS:
CE:
Rate(95%CI)
Cumulative risk ( CI 95%)

LAA:
Rate (95% CI)
Cumulative risk (CI 95%)

SAO:
Rate (95% CI)
Cumulative risk (CI 95%)

Table 3: Kaplan-Meier estimates of the risk of death within defined time intervals after the index stroke

Categories 1 day to 30 days 1 to 6 months 6 m to 1 year 1-2 years 2 - 3 years
Overall:
Mortality (95% CI)
Cumulative risk (CI 95%)
Stroke types:
IS:
Mortality (95% CI)
Cumulative risk (CI 95%)
PIH:
Mortality (95% CI)
Cumulative risk (CI 95%)
SAH:
Mortality (95% CI)
Cumulative risk (CI 95%)
Subtypes of IS:
CE:
Mortality (95% CI)
Cumulative risk (CI 95%)
LAA:
Mortality (95% CI)
Cumulative risk (CI 95%)
SAO:
Mortality (95% CI)
Cumulative risk (CI 95%)

5. Discussion:
Please check the word “community-based” in line 11 on page 7, it is different with the words “population-based”.

Minor Essential Revision:
There is a mistake in Table 2 “2 a 3 years”.

**Level of interest:** An article whose findings are important to those with closely related research interests

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

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.