Reviewer's report

Title: Anemia and chronic kidney disease are potential risk factors for mortality in stroke patients: a historic cohort study

Version: 1 Date: 22 June 2010

Reviewer: Wolfram Doehner

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Major Comments:

1) Methods: Why was a functional assessment scale “similar to Rankin scale” used and not Rankin scale itself? Please consider Rankin instead.

Note: a significant difference exists between both scales as in the Rankin scale stage VI is death whereas the used scale had only 5 stages.

2) Statistics: the level of significance need to be defined, particularly, if as in Table 4 the authors label data as “*p statistically significant”

3) Results section: Prevalence data are presented in an unfavourable way. Please consider Figures at least for main variables GFR and Hb groups.

4) Results section:
Univariate survival analysis should be performed by Cox proportional hazard analysis using Hb and GFR as continuous variables rather than subgroups for GFR and Hb. The current presentation of these data in several tables is confusing to the reader.

5) Table 4: Please, provide units of the variables used in the Cox analysis. Also p 14, first line: why is the probability of mortality calculated for 10g/L change in Hb (i.e. 1g/dl)? If g/dl is used here, please use this unit throughout the manuscript.

6) The comment of HR of GFR should be omitted as the data is not significant.

7) Discussion, p15: the statement “48% of patients had anemia” does not match with the data presented in the results section (p12: 17% had anemia). Also the statement “56% of stroke patients suffered from CKD” cannot be confirmed by the presented data in the results section. Please clarify.

8) Referring to the previous comment and to Figure 1: The authors divide for patients with and without CKD but they report GFR subgroups. Please clarify.

9) The figures are not acceptable and need careful revision for lay out, legends and readability in black and white printout.
10) Please provide numbers of patients at risk in tables below the graphs.

Minor points:

Introduction, p5: “various degrees of end stage renal disease…” reads awkward and should be revised. Sentences 2 and 6 are largely redundant.

The discussion should be shortened by 25%. Also the reference list may be shortened.