Reviewer's report

Title: Are patient falls in the hospital associated with lunar cycles? A retrospective observational study

Version: 1 Date: 29 August 2005

Reviewer: Reto W. W Kressig

Reviewer's report:

General
This well-conducted, interesting retrospective observational study examined inpatient fall rates and their associations with week days, months and lunar cycles. The analysed data were drawn from an impressive 300-bed town hospital fall database including over 3’800 fall events during a time period of 5 years. Main motivation for this analysis was an apparently common health professionals’ belief that there was a correlation between fall rates and times of full moon. None of hypothesized above associations with fall rates was confirmed and the authors conclude that focussing on patients’ modifiable fall risk factors, together with a safe hospital environment remain the most important elements for preventive strategies.

The manuscript is in general well written, the statistical analysis is well done and the results are well presented. Even if the final result is not surprising for experts in the field of fall prevention, this short report represents a contribution to the field by getting the focus of fall prevention away from beliefs towards scientifically approved fall risk factor identification. In order to make this analysis even more meaningful, the authors might consider some of my suggestions as follows:

-----------------------------------------------------------------------------------
Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
Abstract, Background, Conclusion: Taking “anecdotes” about the possible relationship between falls and lunar cycles as main motivation for this analysis it might be worthwhile to develop more about the origins of these beliefs (own studies? Literature?). Especially, what kind of health professionals are involved in this kind of “false rumours” and need to be particularly addressed as a consequence of this report’s results?
Methods: In the variables and measurements section, the system of fall detection and registering needs to be specified. What kind of fall was reported by whom and how?

-----------------------------------------------------------------------------------
Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
A few minor wording and spelling errors:
Abstract, 3rd line, Anecdotes exist (instead of exists); 4th line, The aim of this study was (instead of is)
Background, 15th line, frequencies in the number of: (omit double point)
Discussion, 15th line, We assume that… (review and reformulate the whole sentence which does not make sense in its actual form).

-----------------------------------------------------------------------------------
Discretionary Revisions (which the author can choose to ignore)
The studied in-patient population of this public hospital seems quite heterogeneous, reason why some sub analyses by ward (internal medicine, surgery, geriatrics) for fall rates as well as for potential associations with lunar cycles or weekdays might be interesting. As most published in-patient fall rates are referring to more specific hospital populations (such as acute geriatric wards, rehabilitation wards, long-term care wards etc.), more detailed information about fall rates by ward would considerably strengthen the presented fall data by making them more meaningful and comparable to other published results. Having detailed ward data about (I assume) non-existing associations between falls and lunar cycles or particular week days could prevent even more efficiently from future false beliefs in this regard.

**What next?:** Accept after discretionary revisions

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

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**

I declare that I have no competing interests!