Reviewer’s report

Title: The effects of spinal anaesthesia for elective caesarean section on uterine and umbilical arterial pulsatility indexes in healthy and hypertensive pregnant women: an observational study.

Version: 1 Date: 17 June 2014

Reviewer: Marek Brabec

Reviewer’s report:

The effects of spinal anaesthesia for elective caesarean section on uterine and umbilical arterial pulsatility indexes in healthy and hypertensive pregnant women: an observational study.

Authors:
Luís Guedes-Martins et al.

Author of the comments about statistical aspects of the paper:
Ing. Marek Brabec, PhD
Department of Biostatistics and Computing Services
National Institute of Public Health
Srobarova 48
Praha 10, 10 042
Czech Republic
e-mail: mbrabec@szu.cz

This is a nice study with appealing statistical modeling. It should be published. Here are some details to polish in the revised version:

The dis-balance between number of low-risk and hypertensive pregnancies is quite large, according to the figures on page 3 (lines 58-59). It should be mentioned somewhere in the discussion – and also in the Study limitations section.

On page 10, we find the sentence “Graphical analyses confirmed that 249 the variance function models were successful in accommodating the error heteroscedasticity.” without knowing what variance functions were used, exactly. It is probably the variance function implied by the mixed (heteroscedastic) model, but that should be stated explicitly.

Multivariate analysis heading on page 13 (line 305) is probably not more multivariate than the multiple regression is. The heading should be replaced.

Figures 1 and 2 are very hard to read (even after the jittering). To tell the truth, I...
cannot see the confidence intervals there at all. The authors should consider redrawing them using a more suitable graphical form (e.g. boxplots, or even better, separate histograms, etc. for the fitted values and then segments corresponding to different confidence intervals in the style of plot(intervals(object)) from nlme R package).