Reviewer's report

Title: Risk factors for hepatitis C virus infection among blood donors in southern Brazil: a case-control study

Authors:

Ajacio BM Brandao (ajacio@via-rs.net)
Sandra C Fuchs (scfuchs@zaz.com.br)

Version: 2 Date: 17 May 2002

Reviewer: Prof Charles Hoff

Level of interest: A paper whose findings are important to those with closely related research interests

Advice on publication: Accept after discretionary revisions

Since my task is to critique the design and statistical aspects of this ms., I will confine my remarks to these topics.

In my opinion, this is an appropriately designed study with a thoughtful approach to statistical analysis and interpretation of results. The authors acknowledge that the eligible donors were in good health and did not represent the general population. Thus, they recognize that findings are not completely generalizable to the population-at-large. I note that in the abstract-results section, they state that a representative sample of 178 anti-HCV positive cases and 356 controls were investigated. However, in the abstract-methods section the numbers are 137 and 274, respectively. I could not find an explanation as to why these numbers are different and, unless I have missed it, the authors should address this in the ms.

Sample size estimates for controls and cases were based on a 2:1 ratio of controls to cases and acceptable parameters for univariate comparisons. The sample estimates were then increased 30% to allow for multivariate analyses and adjustment for confounding factors. Multivariate sample size estimation is a bit problematic, but I am inclined to accept their argument. Multivariate analytic approaches were hierarchical in nature and the authors have not chosen stepwise models. An hierarchical approach seems justified since larger sample sizes would probably be required for stepwise regression and, if conducted, Type I error rates could be inflated. Still, for exploratory purposes, it would have been interesting to see whether the same models were generated in both a forward and backward stepwise regression. The use of P values ranging between .05 and .10 as indicating possible trends also seems justified in my opinion.

In general, this is a well-written ms., but I noted a few minor typos/syntactical errors. According to the ms. I downloaded, they are: (i) page 2, next-to-last line from the bottom: aoeight should be aoeE; (ii) page 6, next-to-last line from the bottom: aoeSince have being incarcerated doaE, this portion of the sentence needs to be rewritten; (iii) page 6, last-line: aoeassociated toaE should be aoeassociated withaE.

Competing interests:
None declared.