Reviewer's report

**Title:** Prevalence of pre-transplant electrocardiographic abnormalities and post-transplant cardiac events in patients with liver cirrhosis

**Version:** 2  
**Date:** 11 January 2014

**Reviewer:** Aurore BRONDEX

**Reviewer's report:**

**Major Compulsory Revisions**

1/ **Prevalence of ECG abnormalities:** it seems that the studied population (n=186) is not representative of the 234 patients with cirrhosis undergoing liver transplantation described in this study: indeed, table 1 shows differences concerning the etiology of cirrhosis, cardiovascular risk factors (arterial hypertension, diabetes mellitus) and proportion of coronary investigation. Furthermore, no data are available concerning the prevalence of CAD in these 2 groups.

2/ **This study lacks data on cardiovascular risk factors (obesity and dyslipidemia were not taken into account) and cardiovascular diseases (particularly CAD, hypertensive cardiopathy, arrhythmias) in the studied cirrhotic patients.** These could account for ECG abnormalities, more than cirrhosis itself and more than reported associated factors such as male gender, age, smoking, arterial hypertension, severity and etiology of cirrhosis. To note, these patients seem to have underwent echocardiography (cohort previously used, cf reference 13) and testing for CAD, so data about underlying cardiopathy or CAD should be available. In the same way, it would have been interesting to study the correlation between "ECG positive for CAD" and diagnosed CAD, as these ECG abnormalities are not specific.

3/ **Concerning the prevalence of ECG abnormalities and the risk of cardiac events,** there are major confounding variables in this study. It seems inappropriate to compare ECG abnormalities and outcome of a healthy cohort, without CAD or known cardiovascular disease, without cirrhosis, not undergoing any surgery, with ECG abnormalities and outcome of cirrhotic patients undergoing a major surgery, whose coronary status and cardiovascular medical past is not described (to note, literature reports a prevalence of CAD up to 26% in cirrhotic patients undergoing transplantation, which is a lot more than in general and "healthy" population). Moreover, data concerning cardiovascular risk factors in these 2 populations are not available.

4/ **Concerning the relation of pre-transplant ECG abnormalities to post-transplant cardiac morbidity and mortality:** both are probably related to preexisting cardiovascular diseases (particularly hypertensive cardiopathy, arrhythmias and CAD) that were not taken into account in this study. Thus the relation of
pre-transplant ECG abnormalities to post-transplant cardiac morbidity and mortality cannot be clearly established.

Minor Essential Revisions
Tables count: 5 rather than 4.

Discretionary Revisions
None

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.