Reviewer’s report

Title: The occurrence of Urinary Tract Infection before development of Primary Biliary Cirrhosis: a case control study.

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Reviewer: Pietro Invernizzi

Reviewer’s report:

This paper by Varyani et al reports data on the causal relationship between urinary tract infection (UTI) and primary biliary cirrhosis (PBC). It has been consistently reported an association between UTI and PBC, but all previous data were based on retrospective studies. The question of the role of UTI in PBC is of relevance. Unfortunately the current study is not real prospective study. These authors analysed a validated UK population-based database. As discussed by the authors, this study have a number of bias, but it is far the strongest study design among those on this issue. This study is not conclusive on this topic.

From a statistical point of view, since gender and age can well affect results, it is better to have a similar proportion of female subjects also in the chronic liver disease group (about 85% instead of the current 40% of female subjects) and of similar age with the PBC patients (about 62 years instead of the current 54 years). By matching PBC and CLD patients, it is well possible that the specificity of UTI and PBC will be lost. Indeed, the current findings do not clearly support such specificity.

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.