Reviewer's report

Title: Thyroid disease is a favorable prognostic factor in achieving sustained virologic response in chronic hepatitis C undergoing combination therapy: A nested case control study

Version: 2 Date: 17 November 2010

Reviewer: Giuseppe Montalto

Reviewer's report:

The paper by Tran HA and co-workers, entitled: “Thyroid disease is a favourable prognostic factor in achieving ….”, aims to investigate the possibility that the development of TD in patients with HCV–associated chronic hepatitis, improves the response to the classical antiviral therapy, at the end, the authors show that this is so.

In the opinion of this R, this paper is not suitable for publication in BMC Endocrinology, the major concern being represented by the way in which the hypothesis has been tested. In other words, it would be better to insert the variable “development of TD” like other variables such as age, sex, viral load, ferritin, staging of disease, etc, and to perform a multiple logistic regression to ascertain if the “development of TD” favours or not the attainment of SVR. It is not clear from the text if the 18 pts with TD represent all the patients who developed TD or not, and among how many patients participating the original trial. Yet, a cirrhotic patient has been excluded for lack of controls, but I’m wondering how the selection of the 4 controls for patients with chronic hepatitis was done if there were more the 4 possible controls?

This R does not feel to confirm the thought of the AA that Thyroxin could be seen as an adjuvant to the standard antiviral therapy, when at the moment the standard of care for pts with high thyroid hormone levels, and chronic hepatitis C, is the use of anti-thyroid drugs.

Minor concerns

Introduction section

This section lacks of references, i.e. after “…approximately 5-10% will develop thyroid-related complications.” or “….there are few published reports ….” not followed by references.

Lines 3-4, it is said: “Unfortunately, the incidence and associated sequelae have been predicted to increase in the coming decades (5).” This same reference is quoted in the first line of discussion section, where it is said: “ The prevalence of hepatitis C is now controlled in Western world (5)…” It appears to me a contradiction.

Methods section

First paragraph: as said above, does this 18 pts represent all or part of pts who
developed TD?
3rd line: as previously described it is not followed by a reference.
Therapy: it is not specified if IFN alfa 2a or alfa 2b has been used.
“TD” state for Thyroid disease or Thyroid dysfunction?
Under “Patients and controls participants” it is said that “All (pts) were reviewed at monthly intervals, including those who developed TD with TSH levels…..”
Under “Thyroid disease definition” it is said “Thyroiditis is defined ….”. My question is: which were the TSH values to let the patients undergo a pertechnetate uptake scan? I do not perfectly agree with the AA definition of thyroiditis.

Results section
The first paragraph is superfluous because it has been said in Methods section.
Yet, I’m wondering which is the degree of TD in these 18 pts and how this Dysfunction (or disease) has been managed during antiviral therapy.

Discussion section
At the end of the first paragraph the AA say: “The relationship between TD and SVR was only scarcely addressed and in our solitary meta-analysis, the outcome was negative (8).” Why to insist!

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

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