Reviewer's report

Title: Prevalence of liver fibrosis and risk factors in a general population using non-invasive biomarkers (FibroTest)

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Reviewer: Jerome Guechot

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In this pilot study Poynard and col. have evaluated the feasibility of using Fibrotest® (a serum multivariate test developed by some of these authors) as a non invasive marker for the screening of liver fibrosis in the general population and used it to estimate the prevalence of liver fibrosis.

Transient elastography with Fibroscan® (a device using ultrasound to measure liver stiffness) was used as a confirmation test.

This study is timely and important considering that treatments of fibrosing liver diseases are possible and since it can be speculated that liver fibrosis could be easily diagnosed with the non invasive methods recently described.

In fact, there are different questions posed in the paper: 1/ Is the Fibrotest® valid for a fibrosis screening? 2/ When assessed by FT, what is the prevalence of liver fibrosis in the general population? 3/ What could be the best strategy to used in a large population screening of liver fibrosis?

Discretionary Revisions

The methods are well described. However exclusion criteria have to be developed since 33 patients were excluded because of non interpretable FT. This number is small when compared to the number of included subjects but is not negligible compared to the 209 subjects with presumed fibrosis.

Consumption of liver toxic drugs can be a cause of liver fibrosis. However no data about drugs consumption was given.

The characteristics of the screened population are largely described and compared to the characteristics of the French population. Information about the prevalences of Gilbert’s syndrome, hemolysis, and acute inflammation have to be considered since these situations have a risk of false positive or false negative FT. Furthermore the high risk profile of false FT (0.4%) is not negligible compared with the observed fibrosis prevalence (2.8%).

When the patients with presumed fibrosis were reinvestigated they had a second FT, the concordance between the two FT could be more detailed.

In this study the observed prevalence of cirrhosis was 0.3%, however the authors does not discuss if it is effectively the prevalence in the French population over 40 years of age?
The authors show that there were only one third of subjects with liver fibrosis who had ALT greater than 50 IU/L. In ALT oriented strategy, the choice of this cutoff is not discussed and is surprising since the upper normal values were 26 IU/L in women and 35 IU/L in men, and the “viral hepatitis oriented strategy” is defined in methods with an ALT level above normal.

The observation that the use of CDT might be used as marker of alcohol consumption instead of self-reported alcohol consumption is not only original as claimed by the author but also unexpected. So this point might be more discussed: Were the self-reported alcohol consumptions well completed using a validated method? What about the use of GGT or MCV?

In the discussion, the authors discard other “non-patented” fibrosis biomarkers because “the diagnostic performance of FT is superior”. However they have not been evaluated in general population. So, some data using APRI (or others simple and low-cost biomarkers) compared with FT might be interesting in the studied population.

**Level of interest:** An article of importance in its field

**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