



Fibrosis assessment using FibroMeter combined to first generation tests in hepatitis C.

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AIM: To evaluate the performance of FibroMeter combined to the first generation tests aspartate aminotransferase-to-platelet ratio index (APRI) or Forns index to assess significant fibrosis in chronic hepatitis C (CHC).

METHODS: First generation tests APRI or Forns were initially applied in a derivation population from Rio de Janeiro in Brazil considering cut-offs previously reported in the literature to evaluate significant fibrosis. FibroMeter was sequentially applied to unclassified cases from APRI or Forns. Accuracy of non-invasive combination of tests, APRI plus FibroMeter and Forns plus FibroMeter was evaluated in the Brazilian derivation population. APRI plus FibroMeter combination was validated in a population of CHC patients from Angers in France. All patients were submitted to liver biopsy staged according to METAVIR score by experienced hepatopathologists. Significant fibrosis was considered as METAVIR $F \geq 2$. The fibrosis stage classification was used as the reference for accuracy evaluation of non-invasive combination of tests. Blood samples for the calculation of serum tests were collected on the same day of biopsy procedure or within a maximum 3 mo interval and stored at -70°C .

Résumé en anglais

RESULTS: Seven hundred and sixty CHC patients were included (222 in the derivation population and 538 in the validation group). In the derivation population, the FibroMeter AUROC was similar to APRI AUROC (0.855 0.815, = 0.06) but higher than Forns AUROC (0.769, < 0.001). The best FibroMeter cut-off to discriminate significant fibrosis was 0.61 (80% diagnostic accuracy; 75% in the validation population, = 0.134). The sequential combination of APRI or Forns with FibroMeter in derivation population presented similar performance compared to FibroMeter used alone (79% 78% 80%, respectively, = 0.791). Unclassified cases of significant fibrosis after applying APRI and Forns corresponded to 49% and 54%, respectively, of the total sample. However, the combination of APRI or Forns with FibroMeter allowed 73% and 77%, respectively, of these unclassified cases to be correctly evaluated. Moreover, this combination resulted in a reduction of FibroMeter requirement in approximately 50% of the entire sample. The stepwise combination of APRI and FibroMeter applied to the validation population correctly identified 74% of patients with severe fibrosis ($F \geq 3$).

CONCLUSION: The stepwise combination of APRI or Forns with FibroMeter may represent an accurate lower cost alternative when evaluating significant fibrosis, with no need for liver biopsy.

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- [1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=33639>
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