The combination of a blood test and Fibroscan improves the non-invasive diagnosis of liver fibrosis

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Résumé en anglais	Background and aims: Blood tests and liver stiffness evaluation (LSE) by ultrasonographic elastometry are accurate tools for diagnosing liver fibrosis. We evaluated whether their synchronous combination in new scores could improve the diagnostic accuracy and reduce liver biopsy requirement in algorithm. Methods: Three hundred and ninety patients with chronic liver disease of miscellaneous causes were included. Five blood fibrosis tests were evaluated: APRI, FIB-4, Hepascore, Fibrotest and FibroMeter. The reference was fibrosis Metavir staging. Results: Diagnosis of significant fibrosis (Metavir F≥2). The most accurate synchronous combination was FibroMeter+LSE, which provided a significantly higher area under the receiver operating characteristic curve (0.892) than LSE alone (0.867, P=0.011) or Fibrometer (0.834, P<10−3). An algorithm using the FibroMeter+LSE combination and then a liver biopsy in indeterminate cases had 91.9% diagnostic accuracy and required significantly fewer biopsies (20.2%) than previously published Bordeaux algorithm (28.6%, P=0.02) or sequential algorithm for fibrosis evaluation (SAFE) (55.7%, P<10−3). The Angers algorithm performance was not significantly different between viral hepatitis and other causes. Diagnosis of cirrhosis. The most accurate synchronous combination was LSE+FibroMeter, which provided ≥90% predictive values for cirrhosis in 90.6% of patients vs 87.4% for LSE (P=0.02) and 57.9% for FibroMeter (P<10−3). An algorithm including the LSE+FibroMeter combination, and then a liver biopsy in indeterminate cases, had a significantly higher diagnostic accuracy than the SAFE algorithm (91.0 vs 79.8%, P<10−3), and required significantly fewer biopsies than the Bordeaux algorithm (9.3 vs 25.3%, P<10−3). Conclusion: The synchronous combination of a blood test plus LSE improves the accuracy of the non-invasive diagnosis of liver fibrosis and, consequently, markedly decreases the biopsy requirement in the diagnostic algorithm, notably to <10% in cirrhosis diagnosis.
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