Automation of the Hepascore and validation as a biochemical index of liver fibrosis in patients with chronic hepatitis C from the ANRS HC EP 23 Fibrostar cohort

Titre	Automation of the Hepascore and validation as a biochemical index of liver fibrosis in patients with chronic hepatitis C from the ANRS HC EP 23 Fibrostar cohort
Type de publication	Article de revue
Auteur	Guéchot, Jérôme [1], Lasnier, Elisabeth [2], Sturm, Nathalie [3], Paris, Adeline [4], Zarski, Jean-Pierre [5]
Organisme	ANRS HC EP 23 Fibrostar Study Group [6]
Pays	Pays-Bas
Editeur	Elsevier
Ville	Amsterdam
Type	Article scientifique dans une revue à comité de lecture
Année	2010
Langue	Anglais
Date	04/01/2010
Numéro	1-2
Pagination	86-91
Volume	411
Titre de la revue	Clinica Chimica Acta
ISSN	0009-8981
Mots-clés	Adolescent [7], Adult [8], Aged [9], Automation [10], Cohort Studies [11], Female [12], Hepatitis C, Chronic [13], Humans [14], Liver Cirrhosis [15], Male [16], Middle Aged [17], Sensitivity and Specificity [18], Young Adult [19]

Résumé en anglais	**Background** Hepascore combining serum bilirubin, gamma glutamyl transpeptidase, hyaluronic acid (HA) and α2-macroglobulin with age and sex, was reported as relevant in predicting liver fibrosis in patients with chronic HCV infection and was proposed as an alternative to liver biopsy. **Methods** Since an automated HA assay (Latex method, Wako, Japan) became available, we investigated to automate Hepascore by simultaneous measurements of components using an OLYMPUS AU640 analyzer (Tokyo, Japan). For its clinical evaluation, we considered a cohort of chronic HCV patients included in a multicenter prospective study (ANRS HC EP 23 Fibrostar). **Results** Automated Hepascore was not significantly different than assayed as previously described. An improvement in HA variability was evidenced. In 512 chronic HCV patients, automated Hepascore, using ROC curves analysis, showed good predictive performances for significant fibrosis (AUROC = 0.81), severe fibrosis (AUROC = 0.82), and cirrhosis (AUROC = 0.88). For significant fibrosis, Hepascore (cut-off = 0.5) had a sensitivity of 0.77, a specificity of 0.70, a positive predictive value of 0.71 and a negative predictive value (NPV) of 0.77. Hepascore < 0.25 could exclude significant fibrosis with a sensitivity of 0.95 and a NPV of 0.90 and Hepascore < 0.75 could exclude cirrhosis with a sensitivity of 0.86 and a NPV of 0.97. **Conclusions** This study shows that Hepascore, a non-invasive index of liver fibrosis, necessitating only one serum sample, can be totally automated using a single analyzer and confirms that Hepascore accurately predicts liver fibrosis in chronic HCV. Hepascore might be largely used in assessing liver fibrosis as surrogate to the liver biopsy.
URL de la notice	http://okina.univ-angers.fr/publications/ua12722 [20]
DOI	10.1016/j.cca.2009.10.011 [21]
Autre titre	Clin. Chim. Acta
Identifiant (ID) PubMed	19850017 [22]

Liens

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[21] http://dx.doi.org/10.1016/j.cca.2009.10.011
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