ANNALS of Hepatology

HEPATOLOGY HIGHLIGHTS

July-August, Vol. 14 No.4, 2015: 440-441

Hepatology highlights

Avik Majumdar, Emmanuel Tsochatzis

Sheila Sherlock Liver Unit and UCL Institute for Liver and Digestive Health, Royal Free Hospital and UCL, London, UK

Melo-Villar L, *et al*. Hypovitaminosis D and its relation to demographic and laboratory data among hepatitis C patients

Melo-Villar L, *et al*. The potential detrimental effect of vitamin D deficiency on sustained virological response (SVR) rates after antiviral therapy for chronic hepatitis C infection has been a topic of controversy. This is highlighted by two recent meta-analyses, both consisting of 11 studies with over 2500 pooled patients, that have reported conflicting results.[1,2] In this issue, Melo-Villar, *et al*. aim to determine the role of vitamin D on SVR in a cross-sectional cohort of 237 treatment-naive patients from three centres in Brazil. The study population comprised predominantly of HCV genotype 1 infected patients (86.9%), with 70.1% of patients reported as having advanced fibrosis as assessed by indirect serum biomarkers (Fib-4 and Forns index). Vitamin D deficiency was defined as < 30 ng/mL, which identified 157 patients as deficient. Less than half of the study population (n = 133) underwent and completed antiviral therapy using a standard of care interferon-based regimen. All patients who underwent treatment had genotype 1 infection and attained an SVR rate of 44.2% (n = 59). The presence of vitamin D deficiency was not associated with SVR on univariate or multivariate analyses. This study identifies the potentially high baseline prevalence of hypovitaminosis D in Brazil. However, a number of limitations must be taken into account including the cross-sectional study design and the lack of data regarding factors that may influence serum vitamin D levels such as ethnicity and seasonal sunlight exposure. Regardless, the authors have attempted to fill a gap in the literature using local data from Brazil and thus have highlighted the need for further prospective trials, particularly in different ethnic groups, to finally resolve the issue of SVR and vitamin D deficiency in HCV.

Chávez-Tapia N, *et al*. Prevalence in vulnerable population of liver fibrosis identified by transient elastography

Chávez-Tapia N, *et al*. The global prevalence of advanced liver fibrosis is unknown, with one estimate of 7.5% in a French community based study.[3] Chávez-Tapia, *et al*. have attempted to address this issue by performing community based liver stiffness measurement (LSM) using transient elastography (TE) as measuted by FibroScan® (Echosens, Paris) in a rural Mexican town with low socioeconomic status. The authors recruited 299 (0.45% of the total population of the town) patients via open invitation, who underwent TE, anthropometric measurements and a combination of self-reported questionnaires and physician assessment to catalogue past medical and social histories. The TE cutoff values used were ≥ 9kPa as high risk for cirrhosis, 7-9kPa for intermediate risk and < 7kPa for low risk. Poorly reliable or failed TE measurements occurred in 67/299, with 22/299 (7.35%) being classified as high-risk for cirrhosis. Body Mass Index of ≥ 30 kg/m^2 was the only risk factor on multivariate analysis associated with TE ≥ 9kPa. The authors should be commended in attempting to address the pertinent issue of the prevalence of advanced fibrosis using community based screening. Limitations of the study include the dependence on self-reported data, the reliability criteria used for TE measure-

Correspondence and reprint request: Emmanuel A. Tsochatzis. MD, MSc, PhD.
Sheila Sherlock Liver Unit and UCL Institute for Liver and Digestive Health, Royal Free Hospital and UCL, Pond Street, NW3 2QG, London, UK
Phone: (0044)2077940500 Ext.: 31142, Fax: (0044)2074726226
E-mail: e.tsochatzis@ucl.ac.uk

Manuscript received: April 30, 2015.
Manuscript accepted: April 30, 2015.

ment and the potential for selection bias. The implications of this study are that further population-based research is needed to determine those at risk of significant chronic liver disease through community based screening, particularly with the rising issue of obesity.

Cardoso-Saldaña G, *et al*. Fatty liver and abdominal fat relationships with high C-reactive protein in adults without coronary heart disease

Cardoso-Saldaña G, *et al*. Non-alcoholic fatty liver disease (NAFLD) is a well-established metabolic risk factor for cardiovascular disease.[4-6] In this issue, Cardoso-Saldaña, *et al*. aim to determine whether fatty liver, diagnosed by single-slice computed tomography (CT), is associated with increased high sensitivity C-reactive protein (hs-CRP) concentration thereby suggesting an increased risk of coronary artery disease. The authors also investigated if this potential association was influenced by the presence of abdominal visceral fat (AVF) and insulin resistance (IR). The cut-off value for increased cardiovascular risk was defined as hs-CRP ≥ 3mg/L. The study population included 1,044 patients, of whom 31.6% had NAFLD. The authors demonstrated that the presence of fatty liver was associated with a worsened metabolic risk factor profile. Fatty liver was independently associated with higher mean hs-CRP concentrations, after adjustment for traditional risk factors, as well as with AVF and IR. Moreover, the presence of fatty liver IR, and AVF in combination was associated with hs-CRP ≥ 3mg/L, as evidenced by multivariate logistic regression results with adjusted odds ratios of 3.58 (95% CI 1.32-9.7) and 4.67 (95% CI 2.3-9.4) for men and women respectively. This study would have benefitted from the inclusion of liver biochemistry in the first instance or liver biopsy to define those with steatohepatitis, as well as longitudinal follow-up of patients to determine if these results could be translated into hard clinical endpoints. However, the authors have arrived at significant conclusions in a well-designed cross-sectional study, using CT measurement of AVF. Whether these findings are isolated to patients with steatohepatitis, rather than simple steatosis should be the focus of further research.

REFERENCES

1. Kitson MT, Sarrazin C, Toniutto P, Eslick GD, Roberts SK. Vitamin D level and sustained virologic response to interferon-based antiviral therapy in chronic hepatitis C: a systematic review and meta-analysis. *J Hepatol* 2014; 61: 1247-52.
2. García-Álvarez M, Pineda-Tenor D, Jiménez-Sousa MA, Fernández-Rodríguez A, Guzmán-Fulgencio M, Resino S. Relationship of vitamin D status with advanced liver fibrosis and response to hepatitis C virus therapy: a meta-analysis. *Hepatology* 2014; 60: 1541-50.
3. Roulot D1, Costes JL, Buyck JF, Warzocha U, Gambier N, Czernichow S, Le Clesiau H, et al. Transient elastography as a screening tool for liver fibrosis and cirrhosis in a community-based population aged over 45 years. *Gut* 2011; 60: 977-84.
4. Targher G, Day CP, Bonora E. Risk of cardiovascular disease in patients with nonalcoholic fatty liver disease. *N Engl J Med* 2010; 363: 1341-50.
5. Musso G1, Gambino R, Cassader M, Pagano G. Meta-analysis: natural history of non-alcoholic fatty liver disease (NAFLD) and diagnostic accuracy of non-invasive tests for liver disease severity. *Ann Med* 2011; 43: 617-49.
6. Armstrong MJ1, Adams LA, Canbay A, Syn WK. Extrahepatic complications of nonalcoholic fatty liver disease. *Hepatology* 2014; 59: 1174-97.