PWE-271 RATIO OF IL 10 OVER IL 12 IS A NOVEL SURROGATE TO EVALUATE THE SEVERITY OF NON-ALCOHOLIC STEATOHAPATITIS (NASH)—A PROSPECTIVE CLINICAL PILOT STUDY

doi:10.1136/gutjnl-2012-302514d.271

[1,2]P Basu,* [3]T Nair, [3]S Farhat, [4]M Jafri, [3]K Mittimani, [3]N James Shah, [3]L Ang, [3]S Foustin. *[1]Department of Gastroenterology and Hepatology, Columbia University of Physicians and Surgeons, New York, New York, USA; [2]Department of Gastroenterology, North shore University, New York, New York, USA; [3]Internal Medicine, North shore University, New York, New York, USA; [4]Internal Medicine, NYMC Richmond, New York, New York, USA*

Introduction Non-alcoholic steatohepatitis (NASH) is a growing global epidemic progressing to cirrhosis, liver failure, HCC, warrants liver transplant. The natural history is still not well defined, inflammatory cytokines, intrahepatic immune traffic, degree of apoptosis and path of fibrogenesis are the sequel of the disease process. This study evaluates a novel inflammatory cytokines (IL 10 and IL 12) ratio to predict NAFLD to NASH and its severity index.
Methods Ninety (n=90) patients, mean age of 45 (28–54) were divided into Group A (n=30) BMI (mean) <25% with normal lipids, healthy control. Group B NAFL D (n=30) BMI >29% with NAFLD (hepatic steatosis, Waist/Hip ratio >0.9, high lipids, HOMA >1.8, mean normal ALT, AST, RBP 4, 2.5, Leptin, Adiponectin, TNF α, serum NASH score <0.8, mean fibrotic score <0.1, mean IL 10/IL 12 ratio <0.9. NASH C (n=30), BMI >30, W/H ratio >1.1, high lipids, HOMA >2.2, high AST, ALT, RBP >4.5, high leptin, low adiponectin, high TNF α, IL10/IL12 ratio >2.5. Serums NASH score >0.6, fibrotic score over 0.2. Liver biopsy in NASH group, macrovascular fat 18/30 (60%), ballooning 12/30 (40%), Mallory body 7/30 (23%), METAVIR score F2 12/30 (40%), F3 9/30 (30%), F4 3/30 (10%). Exclusion Criteria: Diabetes, viral hepatitis, autoimmune liver disease, alcohol consumption over 20 g daily, steatogenic medications including herbs.
Results

Characteristic	Group A	Group B	Group C
Serum NASH score	NA	<0.8	>0.6
Mean Fibrotic score	NA	<0.4	>0.2
Macrovascular fat	NA	NA	18/30 (60%)
Mallory body	NA	NA	7/30 (23%)
Ballooning	NA	NA	12/30 (40%)
F2	NA	NA	12/30 (40%)
F3	NA	NA	9/30 (30%)
F4	NA	NA	3/30 (10%)

Conclusion IL 10/12 ratio correlated positively with the progression of NAFLD to NASH. IL 10/12 ratio >2.5 has NASH with high steatosis and fibrotic state and elevated inflammatory cytokines. Larger study will establish the predictive index of IL10/IL 12 NASH severity and prognosis.

Competing interests None declared.

PWE-272 CONCORDANCE OF NON-INVASIVE MARKERS OF LIVER FIBROSIS IN A MIXED POPULATION OF LIVER DISEASES

doi:10.1136/gutjnl-2012-302514d.272

P M Trembling,* M Cheung, S Tanwar, W M Rosenberg. *Centre for Hepatology, University College London, London, UK*

Introduction The enhanced liver fibrosis (ELF) test, a panel of liver fibrosis biomarkers, accurately assesses fibrosis in a range of chronic liver disease (CLD) aetiologies. We evaluated concordance of ELF and transient elastogrpahy (TE) in assessing fibrosis in a cohort of mixed aetiology CLD in our clinic.
Methods Patients who had undergone ELF testing and TE within 1-year for investigation of CLD were identified. Data derived thresholds for ELF were used to identify moderate fibrosis and cirrhosis with 90% sensitivity and specificity respectively. TE thresholds were based on a study of patients with mixed viral aetiology CLD with the same sensitivities/specificities.[1] Valid TE criteria: success rate ≥60%, median stiffness IQR ≤30%. ELF test was included in routine blood testing. TE was performed in 8 min on average by an experienced nurse. Concordance with ELF and TE classification was calculated. In addition patients who had undergone ELF testing or TE with liver biopsy within 2 years were identified. Histological fibrosis severity was evaluated and agreement with ELF/TE calculated.
Results Of 110 consecutive patients, 99 had ELF/TE within 1-year. Median age 50 (22–80). Aetiology: HCV 46%, HBV 25%, unknown 17%, fat 7%, PBC 1%, HBV/HCV 1%, α-1 antitrypsin deficiency 1%, normal 1%. No ELF tests failed. TE failed in 11%, and valid results obtained in 66% and ELF/TE concordance analysis based on these. Correlation between ELF and TE was 0.6. The Abstract PWE-272 table 1 shows distribution of patients for mild, moderate-severe fibrosis and cirrhosis. Agreement between ELF/TE; κ=0.18. Prediction of moderate fibrosis, κ=0.14, with 34% discrepancy. Prediction of cirrhosis, κ=0.49, with 17% discrepancy. Analysis of the notable mild TE/moderate ELF group shows a negative skew of TE (mean 4.13, median 4.30) and a positive skew of ELF (mean 8.44, median 8.37). Clinical correlation of discrepant cases for cirrhosis indicates consistency with ELF in 13% (mod TE/cirrhosis ELF), and 67% (mod ELF/cirrhosis TE). Kappas for agreement with histology for moderate fibrosis and cirrhosis were, for ELF: 0.19, 0.71 (n=16); for valid TE: 0.13, 0.79 (n=11).

Abstract PWE-272 Table 1

	TE (n)			
	<5.2 (mild)	5.2–12.8 (mod–severe)	>12.9 (cirrhosis)	Total
ELF (n)				
<7.7 (mild)	5	4	0	14%
7.7–9.8 (mod–severe)	18	19	3	61%
>9.81 (cirrhosis)	0	8	8	25%
Total	35%	48%	17%	100%

Conclusion In a cohort of mixed aetiology CLD, ELF was more reliable than TE in generating a result with a failure rate of 34% for TE. Agreement between ELF and TE increased with fibrosis severity. The mild/moderate discordance suggests a need to review thresholds. When selecting non-invasive tests for use in busy clinics failure rate of the test and time taken to obtain a result should be considered.

Competing interests P Trembling: None declared, M Cheung: None declared, S Tanwar: None declared, W Rosenberg Grant/Research Support from: Siemens Healthcare Diagnostics.

REFERENCE

1. **Degos F**, Perez P, Roche B, *et al.* Diagnostic accuracy of FibroScan and comparison to liver fibrosis biomarkers in chronic viral hepatitis: a multicenter prospective study (the FIBROSTIC study). *J Hepatol* 2010;**53**:1013–21.

PWE-273 ENHANCED LIVER FIBROSIS TEST ACCURATELY IDENTIFIES LIVER FIBROSIS AND PREDICTS CLINICAL OUTCOMES IN ALCOHOLIC LIVER DISEASE

doi:10.1136/gutjnl-2012-302514d.273

[1]P M Trembling,* [2]J Parkes, [1]S Tanwar, [3]A D Burt, [1]W M Rosenberg. *[1]Centre for Hepatology, University College London, London, UK; [2]Public Health Sciences and*