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Diagnostic accuracy of FIB-4 and FIB-5 scores as compared to fibro scan for assessment of liver fibrosis in patients with non-alcoholic fatty liver disease

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NAFLD, a frequent cause of chronic liver disease, can progress from NAFL to NASH to cirrhosis and eventually to HCC or ESLD. Fibrosis can be diagnosed by Fibro scan and liver biopsy. Limited access/exorbitant cost of fibro scan and associated risks with biopsy has made exigent demand of serum-based fibrosis scores (FIB-4 & FIB-5) to be validated for their accuracy and efficacy, so as to get a cut-off value beyond which fibrosis could be ruled out with certainty. By this, NAFL patients can be monitored and treated with almost care to arrest/delay its further progress to its cumbersome form.

FIB-4 formula: Age (years)×AST(IU/L)/{platelet count(109/L)×ALT(IU/L)1/2}

FIB-5formula: Albumin(g/L)×0.3+platelet-count(109/L)×0.05−alkaline phosphatase(IU/L)×0.014+ AST/ALT ratio×6+14

A total of 145 patients were categorized based on kPa score of fibro scan as group I with mild/moderate fibrosis comprising of F0 to F2 (kPa:0 to 9) and group II with advanced fibrosis comprising of F3 and F4 (kPa:>9.1). The FIB-4 score was significantly higher in group II as compared with group I , p-value = 0.0001. FIB-5 score of group II was significantly lower as compared with group I, p-value = 0.003. FIB-4 at cut-off of <2.02 had a NPV of 90.7%. FIB-5 at a cut-off of <-7.11 has an NPV of 94.1% and at <-3.24 had NPV of 88.9%. So, FIB-4 and FIB-5 have limited efficacy to predict advanced fibrosis as both tests had sensitivity in modest range but have sound ability to rule out significant fibrosis accurately because of high NPV of greater than 90%.

Biography

Dr. Bandana Kumari (MBBS, MD[Biochemistry], DGO, FCGP) is presently working as Associate Professor in the Department of Biochemistry at All India Institute of Medical Sciences, Patna, Bihar, India. She has published more than 15 papers and two book chapters. She is serving as editorial board member of Ocean journal of Gastroenterology.