

**COMPARISON OF TRIGLYCERIDE-GLUCOSE INDEX (TyG INDEX) AND FIB-4 FOR ASSESSING FIBROSIS IN NAFLD**



JEJI, Pukhraj Singh [1]; MISHRA, Debakanta [1]; SHUKLA, Mayank [1]; PATI, Girish Kumar [1]; NARAYAN, Jimmy [1]; PRADHAN, Subhasis [1]; KANUNGO, Manjit [1]; PATNAIK, Swarup [1]; SINGH, Ayaskant [1]; K, Pruthvi [1]; PALNATI, Vasista [1]; KARANAM, Anirudh [1]



1 – Department of Gastroenterology, Institute of Medical Sciences & SUM Hospital, Bhubaneswar, India, Email: [pukhraj Singh93@gmail.com](mailto:pukhraj Singh93@gmail.com)

**OBJECTIVES**

In patients with NAFLD, liver histology still remains the gold standard to assess all three components of hepatic steatosis, inflammation, and fibrosis. However, liver biopsy is an invasive procedure and is not the preferred modality by most patients. Thus non-invasive markers like the triglyceride–glucose (TyG) index a recently developed indicator that can identify individuals at risk for NAFLD and has shown significant association for the identification of NAFLD risk.

The aim and objective of this study are to compare FIB-4 and TyG index for fibrosis risk assessment in NAFLD patients.

**MATERIALS & METHODS**

Patients with a diagnosis of fatty liver were included in the study. Fibrosis was ascertained by transient elastography scores with patients having more than 7 kPa being considered to have fibrosis. TyG index and FIB 4 were calculated. Standard cut-off values of FIB-4 of 1.3-1.45 were considered while generally accepted cut-off values of TyG index of 8.41 for NAFLD were taken for comparison. Means were compared following AUROC analysis and the Student t-test was applied for mean comparison.

**Correlation Analysis**

**RESULTS**

A total of 22 cases and 20 controls were taken. Analyses of means showed a significant increase in FIB-4 scores in patients with high transient elastography ( $p = 0.012$ ) compared to the TyG index ( $p = 0.978$ ). In fact, mean values of the TyG index were very similar in cases as well as controls. AUROC assessment also showed the statistical significance of FIB – 4 (AUROC – 0.636,  $p = 0.043$ ) over the TyG index (AUROC – 0.514,  $p = 0.88$ ). Statistical superiority was also noted for FIB – 4 by comparison of means by Student T test ( $p = 0.002$ ).

**CONCLUSION**

TyG Index is non-superior to FIB-4 for assessment of fibrosis in NAFLD patients.

		FIB4	TyGIndex	ELASTOGRAP HY
FIB4	PearsonCorrelation	1	.125	.456**
	Sig. (2-tailed)		.430	.002
	N	42	42	42
TyGIndex	PearsonCorrelation	.125	1	.038
	Sig. (2-tailed)	.430		.809
	N	42	42	42
ELASTOGRAPHY	PearsonCorrelation	.456**	.038	1
	Sig. (2-tailed)	.002	.809	
	N	42	42	42