Diagnostic Accuracy of FibroScan Controlled Attenuation Parameter (CAP) As A Non-Invasive Test for Steatosis in Liver Transplant Recipients.

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INTRODUCTION

- Metabolic syndrome and obesity are common after liver transplantation (LT) leading to hepatic steatosis (HS).
- We evaluated the accuracy of the FibroScan controlled attenuation parameter (CAP) as a non-invasive test for the detection of steatosis in LT recipients.

METHODS

- This is a retrospective study comparing the accuracy of the FibroScan CAP to liver biopsy in detecting clinically significant steatosis (CSS) (Stage 2-3).
- The median time between liver biopsy and Fibroscan was 84 days [IQR: 14-317].
- Experienced hepatopathologists did histological grading of the steatosis. The HS grades from liver biopsy were graded as S0 (<5%), S1 (5–33%), S2 (33–66%), and S3 (>66%).
- Areas under the receiver operator curves (AUROC), sensitivity, specificity, positive predictive value (PPV), and negative predictive (NPV) values were calculated (STATA16 Software).
- Optimal cut-off values maximizing specificity and sensitivity were determined.

## Table 1: Vibration-controlled transient elastography (VCTE): FibroScan Details

Vibration-controlled transient elastography (VCTE): FibroScan		
Time between Liver biopsy and FibroScan, Days		* 84 [14-317]
FibroScan	CAP Score (dB/m)	*275 [206-337]; 269.08 ± 87.81
	Kilopascals (kPa)	*8.3 [5.6-11]; 10 ± 8.85

Data presented as n/N (%) or count (%) for categorical variables and *Median [IQR]; mean (standard deviation); for continuous variables.

Table 2: Sensitivity, Specificity of FibroScan for Detecting for Detecting Significant steatosis (S2-S3) Using Biopsy as a Gold Standard Test.

	Cut-Off value	Sensitivity	Specificity	PPV	NPV	LR+	LR-
CAP Score (dB/m)	≥ 271	100%	50%	14.30%	100%	2.00	0.00

Figure 1: Sensitivity, Specificity of FibroScan for Detecting for Detecting Significant steatosis (S2-S3) Using Biopsy as a Gold Standard Test.

CAP score: AUROC= 0.85
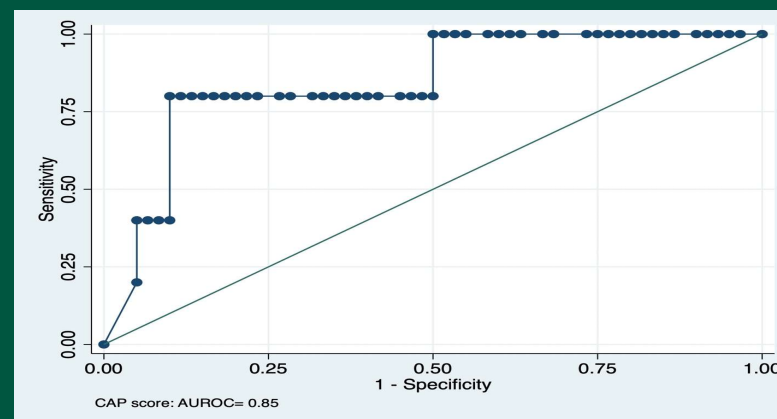
RESULTS

- We evaluated 65 patients with a mean age of 57 years and a mean body mass index of 30 kg/m2.
- 26 (40%) had diabetes and hypertension of the total patients. After the liver transplant, the median time to liver biopsy was 15 months (IQR: 13-37).
- We found that 42 patients (64.6%) had no steatosis, 18 (27.7%) had S1, 4 (6.15%) had S2 and 1 (1.54%) had S3 steatosis.
- Overall, clinically significant steatosis (S2-S3) was present in 5 (7.7%) patients.
- The AUROC of the FibroScan, to detect CSS was 0.84 (Figure 1).
- For specific cut-off value FibroScan (CAP≥271), for detecting CSS has 100% sensitivity, 50% specificity, 14.30% PPV and 100% NPV (Table 1-2).

CONCLUSION

- FibroScan CAP is an excellent test to detect CSS in LT recipients and minimize the need for liver biopsy to assess hepatic steatosis.

DISCLOSEURE

- The authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities