

# Transient Elastography to Assess Hepatic Fibrosis in Chronic Hemodialysis Hepatitis C Patients (Genotype 4) At Kasr Al Ainy

Mohamed Magdy (MSc)<sup>1</sup>, Bahaa Zayed (MD)<sup>1</sup>, Rasha A. Abdl Aziz (MD)<sup>2</sup>,  
Dina Sabry (MD)<sup>3</sup>, Tarek Hussien (MD)

1-Department of Internal medicine and Nephrology Faculty of Medicine, Cairo University Faculty of Medicine, 11562 Cairo, Egypt.

2- Department of Gastroenterology and Tropical Department, Faculty of Medicine, Cairo University, 11562 Cairo, Egypt.

3- Department of Medical Biochemistry Department, Faculty of Medicine, Cairo University, 11562 Cairo, Egypt.

## Introduction

In clinical practice, assessing hepatic fibrosis for hemodialysis patients with chronic hepatitis C (CHC) can help to evaluate the eligibility for renal transplantation, the necessity for IFN-based therapy, the longterm prognosis, and complications related to portal hypertension and hepatocellular carcinoma. Using transient elastography (TE, Fibroscan) to predict the severity of hepatic fibrosis has not been prospectively evaluated in those patients.

## AIM

To assess liver fibrosis in chronic hepatitis C hemodialysis patients by fibroscan and comparing its results with serum hyaluronic acid level.

## Method

This is a cross sectional study was conducted from July 2012 to March 2014 on a cohort of 134 Egyptian patients on chronic hemodialysis patients at Kasr Al Ainy hospital (King Fahd and Kidney & dialysis units) aged between 17 and 67 years for more than one year of hemodialysis. All patients were subjected to routine labs, HBs Ag, HBc Ab, HBe Ag, HCV Ab and HIV Ab, quantitative PCR for both HCV and HBV, hyaluronic acid serum level, alpha feto protein (AFP). Abdominal ultrasound was done to positive cases, 29 patients out of 77 HCV positive patients had a fibroscan done and results are correlated with serum hyaluronic acid level.

## Results

The mean of age is  $47.43 \pm 12.65$  years, 50.7 % males and 49.3% female, duration range was 1-18 with mean  $5.96 \pm 4.12$  years. The most common cause for ESRD was hypertensive nephropathy 32.1% and diabetic nephropathy 18.7%. HCV +ve 57.5 % and 42.5% -ve, HBV +ve 3%.

		Hyaluronic acid	Fibroscan
Age	Correlation Coefficient (r)	-.043	-.007
	p-value	.619	.970
	N	134	29
Duration of HDX	Correlation Coefficient (r)	.252**	.231
	p-value	.003	.228
	N	134	29
HCV PCR	Correlation Coefficient(r)	.249*	.258
	p-value	.029	.177
	N	77	29
α feto protein	Correlation Coefficient(r)	-.038	-.289
	p-value	.659	.129
	N	134	29
Hyaluronic acid	Correlation Coefficient(r)		.758**
	p-value		.000
	N		29
Fibroscan	Correlation Coefficient(r)	.758**	
	p-value	.000	
	N	29	



There is strong correlation between duration of hemodialysis and serum hyaluronic acid (p value 0 .003).

There is strong correlation between HCV PCR and serum hyaluronic acid

(p value 0.029, r = 0. 249).

There is strong correlation between serum hyaluronic acid and fibroscan

(p value < 0.001).

## Conclusion

Fibroscan is a simple non invasive test that can be used to assess liver fibrosis in hemodialysis patients. We recommend making it one of the routine investigations of hemodialysis patients especially those undergoing renal transplantation. Hyaluronic acid level increases with increased duration of hemodialysis patients and it is higher in HCV positive than HCV negative patients.

## References

Foucher J, Castera L, Bernard PH, Adhoute X, Laharie D, et al. Prevalence and factors associated with failure of liver stiffness measurement using fibroscan in a prospective study of 2114 examinations.

Eur J Gastroenterol Hepatol 2006;18:411-2.

Liu C, Liang C, Huang K, et al.

Transient Elastography to Assess Hepatic Fibrosis in Hemodialysis Chronic Hepatitis C Patients.

Clinical Journal of the American Society of Nephrology 2011. doi: 10.2215/CJN.04320510.

Halfon P, Bourliere M, Penaranda G et al.

Accuracy of hyaluronic acid level for predicting liver fibrosis stages in patients with hepatitis C virus.

Comp Hepatol 2005; 11:4-6.

