

# NONALCOHOLIC FATTY LIVER DISEASE (NAFLD) - A NEW CARDIOVASCULAR RISK FACTOR IN PERITONEAL DIALYSIS PATIENTS

Mikolasevic I, Racki S, Colic M, Devcic B, Lukenda V, Zaputovic L, Babic V, Orlic L  
University Hospital Rijeka, Croatia

## Introduction:

Although the significant improvement in the reduction of infectious complications was fulfilled during the last years, cardiovascular (CVD) mortality in peritoneal dialysis (PD) patients remains unchanged. Therefore, searching for new causes of increased CVD risk in PD patients has attracted further research interest. Recent investigations indicated that nonalcoholic fatty liver disease (NAFLD), a hepatic component of metabolic syndrome, is associated with an increased risk of CVD. Accordingly, we were interested to explore the frequency of NAFLD in PD patients and to analyze factors in PD patients associated with NAFLD occurrence. In addition, we were interested to investigate if NAFLD is associated with higher CVD risk in our PD patients.

## METHODS

In the present cross-sectional study, we analyzed 58 PD patients

## METHODS

### FIBROSCAN

The controlled attenuation parameter (CAP) was used to detect and quantify liver steatosis with the help of transient elastography (TE) (Fibroscan®)

### CAROTID ULTRASOUND

A carotid ultrasound was performed in all patients to measure carotid intima-media thickness (IMT) and plaque as surrogate measures of increased CVD risk and to investigate their association with NAFLD.

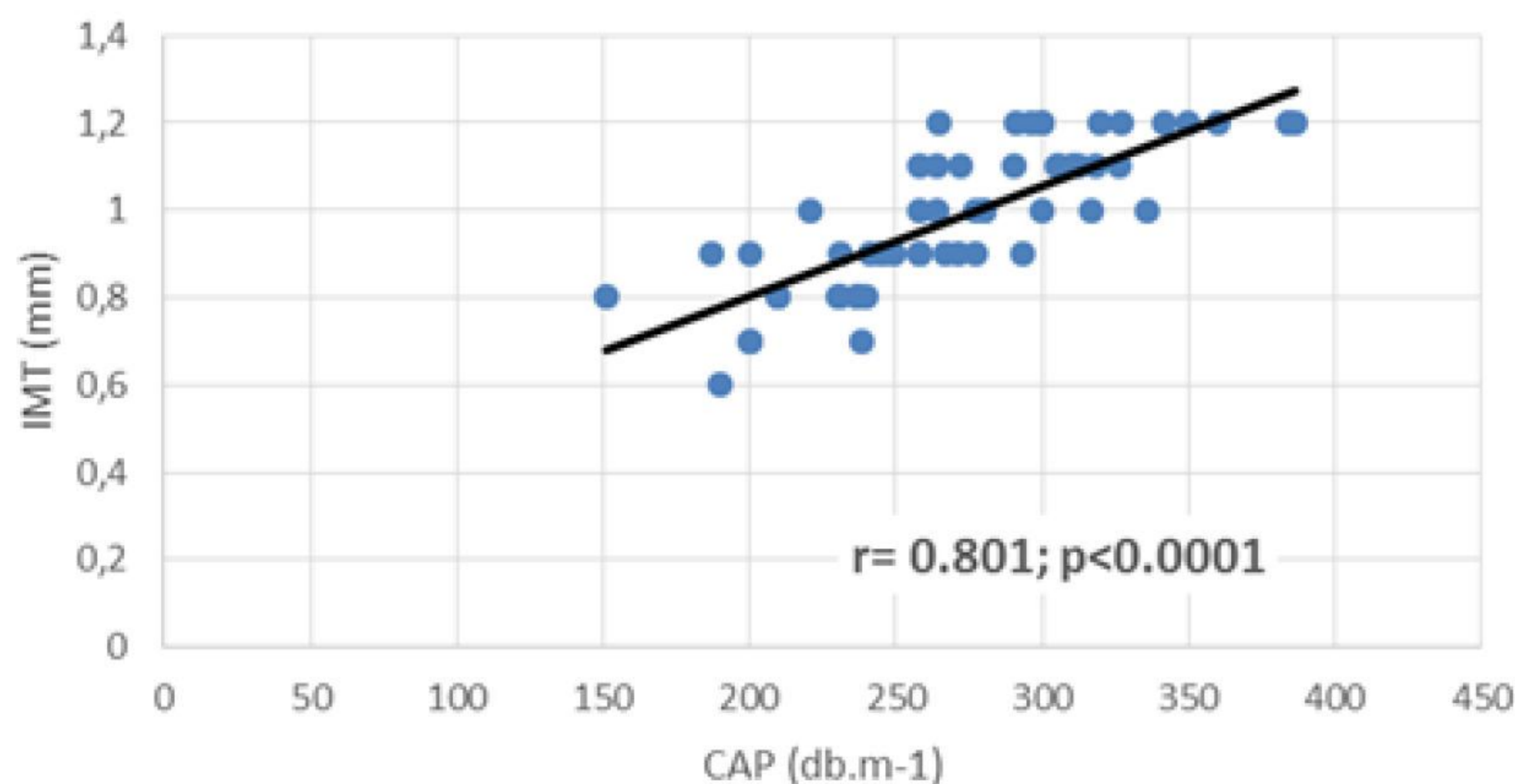
## RESULTS

NAFLD was present in 74.1% of PD patients. PD/NAFLD patients had significantly lower hemoglobin ( $113.6 \pm 13.8$  vs.  $127.5 \pm 21.3$ ;  $p=0.007$ ) and serum iron ( $11.8 \pm 4.1$  vs.  $16.9 \pm 7$ ;  $p=0.002$ ) values in comparison to the non-NAFLD/PD patients.

Furthermore, PD/NAFLD patients had significantly higher values of hs-CRP ( $7.6 \pm 7.9$  vs.  $2.2 \pm 1.7$ ;  $p=0.02$ ) and ferritin ( $286.1 \pm 157.4$  vs.  $146.2 \pm 118$ ;  $p=0.005$ ) than PD patients without NAFLD.

The daily number of glucose solutions ( $p=0.04$ ), obesity ( $p=0.02$ ), and presence of hypertension ( $p=0.01$ ), diabetes ( $p<0.0001$ ) and dyslipidemia ( $p<0.0001$ ) were found to be independent predictors of NAFLD occurrence in PD patients.

PD patients with NAFLD showed more carotid atherosclerosis than PD patients without NAFLD. In addition, CAP values (as indicator of liver steatosis) had shown strong positive association with IMT



PD patients with NAFLD are at high risk for atherosclerosis. The clinical implication of this finding is that presence of NAFLD in PD patients may help in cardiovascular risk stratification and assessment.

## CONCLUSION