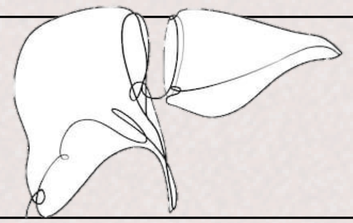
BIOMARKERS IN DETERMINING THE RISK OF LIVER FIBROSIS IN PATIENTS WITH NON-ALCOHOLIC FATTY LIVER DISEASE AND HYPERTENSION



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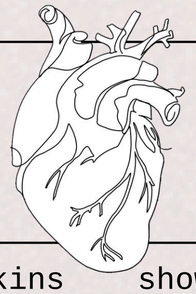

INTRODUCTION

Non-alcoholic steatohepatitis (NASH) affects up to 50% of patients with arterial hypertension (HT).
Laboratory biomarkers are believed to help in liver fibrosis (LF) risk determination in patients with NASH and HT.

PURPOSE

To assess the kallistatin, IL-10, IL-1β and high-sensitivity CRP (hsCRP) significance in LF risk evaluation in patients with NASH and HT.

METHODS

63 patients with NASH and HT and 52 patients with isolated NASH were examined. Plasma kallistatin, IL-10, IL-1β and hsCRP levels were evaluate using ELISA. The results were statistically processed with the ROC analysis, the area under ROC curve (AUC), sensitivity (SE) and specificity (SP) were determined.

RESULTS

Kallistatin showed excellent diagnostic characteristics for LF development and progression risk determination in patients with NASH and HT (AUC=0.975, p=0.003, SE=95%, SP=100%; AUC=0.881, p<0.001; SE=95%, SP=76.9%) and isolated NASH (AUC=0.867, p<0.001); SE=76.5%, SP=81.0%; AUC=0.889, p<0.001, SE=92.3%, SP=81.3%).

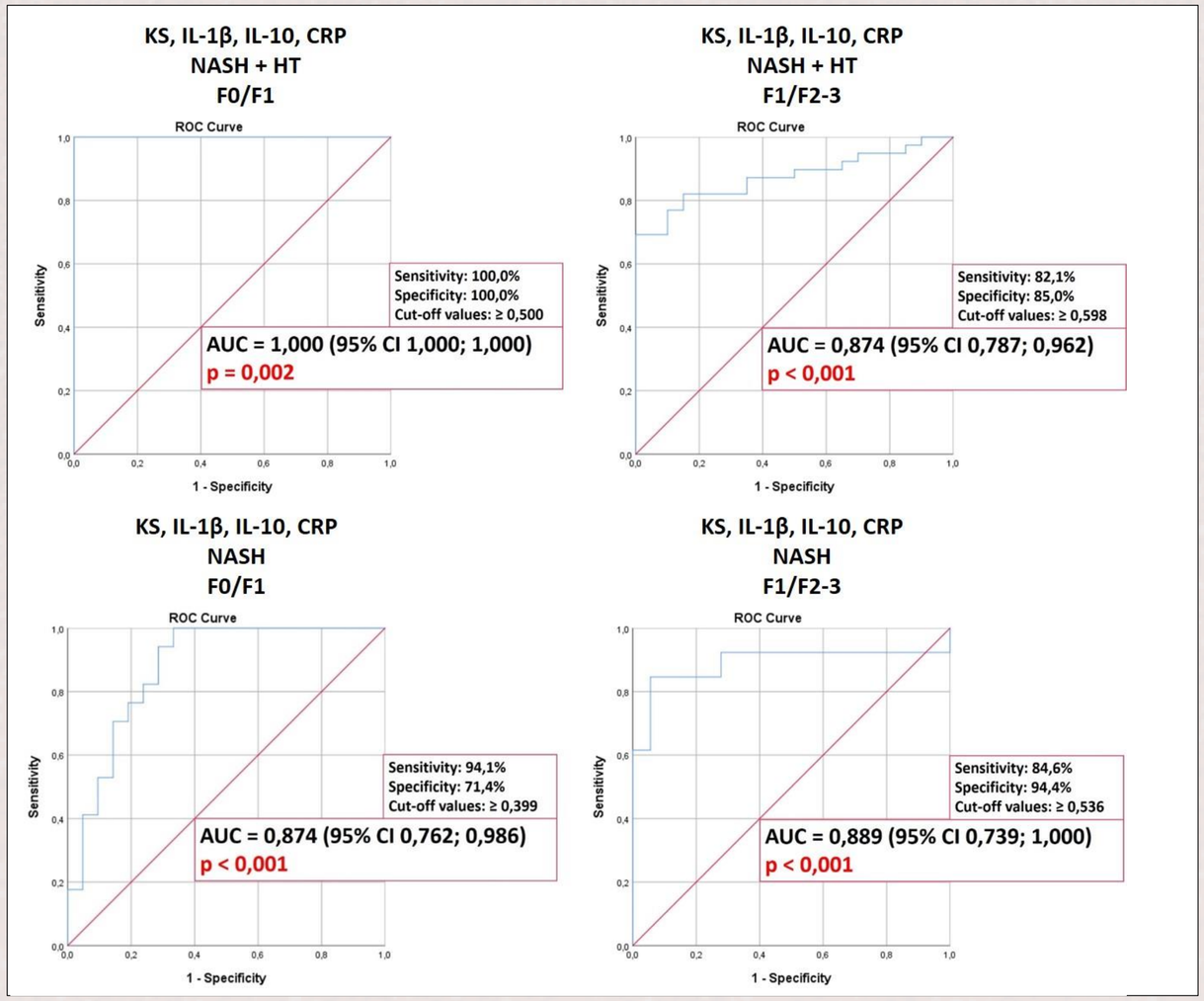

Fig. 1. Characteristics of ROC analysis of determining the level of kallistatin, IL-10, IL-1β, hsCRP for assessing the risk of LF development and progression

Interleukins showed good diagnostic characteristics for LF development risk in both groups (IL-10: AUC=0.769, p=0.012, SE=70%, SP=64.1%; AUC=0.710, p=0.009, SE=94.4%, SP=69.2%, IL-1β: AUC=0.752, p=0.02, SE=71.8%, SP=75.0%, AUC=0.788, p=0.007, SE= 84.6%, SP=66.7%), hsCRP showed diagnostical potential only in NASH and HT patients (AUC=0.849, p<0.001, SE=71.8%; SP=75.0%). Simultaneous evaluation of all biomarkers showed excellent and very good diagnostic characteristics for LF development and progression risk determination in NASH and HT patients (AUC=1.000, SE=100%, SP=100%, p=0.002; AUC=0.874, SE=82.1%, SP=85.0%, p<0.001) and isolated NASH group (AUC=0.874, SE=94.1%, SP=71.4%, p<0.001; AUC=0.889, SE=84.6%, SP=94.4%, p<0.001) (Fig.1).

CONCLUSION

This allows us to offer kallistatin, IL-10, IL-1β, and hsCRP combination for LF identification in patients with NASH and HT.

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