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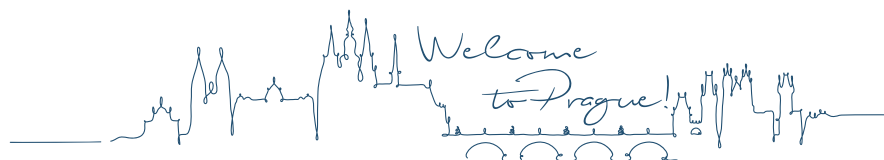
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ABSTRACT BOOK



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Gut microbiota and SIBO in NAFLD patients

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Aims were to analyze the gut microbiota composition in patients with NAFLD with possible examination of aggressive and protective factors, including SIBO existence and biochemical markers.

Methods included 43 patients with NAFLD with average age 46.97 ± 2.53 . and BMI 27.43 ± 0.74 . All patients underwent biochemical evaluation – lipid profile, C-reactive protein, ALT, AST, GGTP, CRP, bilirubin, apolipoprotein B, apolipoprotein A1. Determination of microbial composition at the level of major microbial phyla was carried out by identification of total bacterial DNA, and DNA of Bacteroidetes, Firmicutes and Actinobacteria was performed with quantitative real-time PCR (qRT-PCR). Ultrasound examination and liver elastography was proved to all patients. All subjects were examined by a lactulose breath test (LBT).

Results: The prevalence of SIBO in patients with NAFLD was 51.2%. The percent of microbiota composition was – Bacteroidetes 16.7 ± 2.99 , Firmicutes – 45.3 ± 2.99 , Actinobacteria – 25.9 ± 1.9 , Firmicutes/Bacteroidetes ratio (F/B) – 6.47 ± 1.55 .). Strong positive correlation among F/B index and triglycerides ($r = 0.42$) and ALT ($r = 0.4$). Additionally, there was middle-strong correlation between SIBO existence and Firmicutes increasing in patients with NAFLD ($r = 0.39$). Most of the studies, show the potential exacerbating influence Firmicutes on the fatty infiltration progression. Some of the data suggests to include the F/B index to the list of early markers of NAFLD. There is an interesting point in SIBO existence and its connection with Firmicutes by widely-spread fact that SIBO is associated with gram-negative microbiota, to which Firmicutes do not belong.

Conclusion: We can suggest, that there is a violation in composition of some species of bacteria, not phyla, are leading to SIBO occurrence in the background of NAFLD and it could be not only gram-negative bacteria, but gram-positive, that are associated with NAFLD.

Keywords: Microbiota, Non-alcoholic fatty liver disease, NAFLD, Steatosis, SIBO