

Association between serum uric acid and non-alcoholic fatty liver disease: a meta-analysis / Guntur Darmawan, Laniyati Hamijoyo, Irsan Hasan

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Abstrak

ABSTRACT

Background: non alcoholic fatty liver disease (NAFLD) is known to be associated with some metabolic disorders. Recent studies suggested the role of uric acid in NAFLD through oxidative stress and inflammatory process. This study is aimed to evaluate the association between serum uric acid and NAFLD. Methods: a systematic literature review was conducted using Pubmed and Cochrane library. The quality of all studies was assessed using the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE). All data were analyzed using REVIEW MANAGER 5.3. Results: eleven studies from America and Asia involving 100,275 subjects were included. The pooled adjusted OR for NAFLD was 1.92 (95% CI: 1.66-2.23; $p < 0.00001$). Subgroup analyses were done based on study design, gender, non-diabetic subjects, non-obese subjects. All subgroup analyses showed statistically significant adjusted OR and most of which having low to moderate heterogeneity. Two studies revealed relationship between increased serum uric acid levels and severity of NAFLD. No publication bias was observed. Conclusion: our study demonstrated association between serum uric acid level and NAFLD. This finding brings a new insight of uric acid in clinical practice. Increased in serum uric acid levels might serve as a trigger for physician to screen for NAFLD.