HİTİT MEDICAL JOURNAL
HİTİT ÜNİVERSİTESİ TIP FAKÜLTESİ DERGİSİ

e-ISSN: 2687-4717 Cilt|Volume: 7 • Sayı|Issue: 1 - Şubat|February 2025

Comment on "The Relationship of Gallstone Disease with Serum RBP4 Level, Vitamin D, Lipid Profile, Insulin Resistance and Uric Acid Levels"

"Safra Taşı Hastalığının Serum RBP4 Düzeyi, D Vitamini, Lipid Profili, İnsülin Direnci ve Ürik Asit Düzeyleri ile İlişkisi" Üzerine Yorum

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Makale Bilgisi | Article Information
Makale Türü | Article Type: Editöre Mektup | Letter to Editor
Doi: https://doi.org/10.52827/hititmedj.1520691
Geliş Tarihi | Received: 24.07.2024
Kabul Tarihi | Accepted: 03.10.2024
Yayım Tarihi | Published: 25.02.2025

Atıf | Cite As
Doğantekin B, Çakır Güney B. Comment on "The Relationship of Gallstone Disease with Serum RBP4 Level, Vitamin D, Lipid Profile, Insulin Resistance and Uric Acid Levels". Hitit Medical Journal 2025;7(1):148-150. https://doi.org/10.52827/hititmedj.1520691

Hakem Değerlendirmesi: Editör tarafından değerlendirilmiştir.
Etik Beyanı: Gerek yoktur.
İntihal Kontrolleri: Evet (iThenticate)
Çıkar Çatışması: Yazarlar çalışma ile ilgili çıkar çatışması beyan etmemiştir.
Şikayetler: hmj@hitit.edu.tr
Katkı Beyanı: Fikir/Hipotez: BD, BÇG Tasarım: BD, BÇG Veri Toplama/Veri İşleme: BD, BÇG Veri Analizi: BD, BÇG Makalenin Hazırlanması: BD, BÇG.
Hasta Onamı: Gerek yoktur.
Finansal Destek: Bu çalışma ile ilgili herhangi bir finansal kaynaktan yararlanılmamıştır.

Peer Review: Evaluated by editor-in-chief.
Ethical Statement: Not applicable
Plagiarism Check: Yes (iThenticate)
Conflict of Interest: The authors declared that, there are no conflicts of interest.
Complaints: hmj@hitit.edu.tr
Authorship Contribution: Idea/Hypothesis: BD, BÇG Design: BD, BÇG Data Collection/Data Processing: BD, BÇG Data Analysis: BD, BÇG Manuscript Preparation: BD, BÇG.
Informed Consent: Not applicable.
Financial Disclosure: There are no financial funds for this article.

Dear Editor,

We read with great interest the research article titled "The Relationship of Gallstone Disease with Serum RBP4 Level, Vitamin D, Lipid Profile, Insulin Resistance and Uric Acid Levels" by Kurt İnci et al., published in the second issue of Hitit Journal of Science in 2024 (1). We would like to express our gratitude to the authors and the editorial team for their valuable contributions. Through this letter, we aim to highlight specific elements that we believe will enrich the ongoing discussion around the article. Obesity and gallstone disease are frequently co-occurring conditions. Given the rising global prevalence of obesity and metabolic syndrome, investigating the relationship between gallstones and insulin resistance is of significant importance (2). Insulin resistance, as a component of metabolic syndrome, contributes to gallstone disease by altering bile composition and increasing the risk of cholesterol stone formation, alongside other risk factors such as obesity, dyslipidemia, hypertension, and type 2 diabetes. One of the significant objectives of the study conducted by Kurt İnci et al. is to examine the relationship between insulin resistance and RBP-4, a bioactive protein of adipose tissue, and gallstone disease. Given the limited research in this area, we recognize and appreciate the relevance of this study.

However, we wish to express our concerns regarding the exclusion criteria of the study. The Methods section does not specify whether the patients were using medications that could impact the study outcomes, such as metformin, which enhances insulin sensitivity and reduces hepatic glucose production; allopurinol, which decreases uric acid production; or thiazide diuretics, which increase uric acid reabsorption in the kidneys (3-5). The lack of information on whether these medications were used could affect the study's independent variables and outcomes.

The study categorized patients into two groups based on abdominal imaging conducted over the past two years to assess the presence of gallstones. However, there is a potential risk that patients initially classified as stone-free may develop gallstones over nearly a three-year period. A principal limitation of the study is the temporal mismatch between the blood samples collected for RBP-4 evaluation and the ultrasound imaging. This lack of synchronization between imagining, the other retrospectively screened biochemical parameters and blood samples of RBP4 introduces the possibility of variability in the results and constitutes a major limitation of the study.

In conclusion, while recognizing the merit of Kurt İnci's study, we believe that addressing our concerns regarding the exclusion criteria and temporal mismatch will further strengthen the scientific validity and clinical relevance of the findings. We look forward to advancements in this research area with great interest. Furthermore, we wish to express our sincere appreciation to the author, Kurt İnci, for his valuable contribution to the field despite the limited existing literature.

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Response from author:

Dear Editor,

First of all, thank you for your contribution to our article titled 'The Relationship of Gallstone Disease with Serum RBP4 Level, Vitamin D, Lipid Profile, Insulin Resistance and Uric Acid Levels'. The point mentioned by the author that we are based on imaging studies performed within the last 2 years is one of the missing points of the study, but when our patients are evaluated individually, there are only patients with gallstone disease whose imaging studies were obtained in a period of >3 months. The

imaging of the entire patient group without gallstones was within 3 months. Since it was a study derived from a thesis, the details of the study were restricted in the article. However, the fact that this was not stated in the study material method is a deficiency and the author is right in this regard. Patients were not on metformin and did not have a diagnosis of diabetes. The use of allopurinol, which reduces uric acid production, and antihypertensive treatment were questioned and there were no patients using these treatments in our study. I would like to emphasize again that these data were not included in order not to make the article too long since it is a publication derived from a thesis and the author has made very correct points. Thank you very much.
Dr.Bediz Kurt İnci

Response from editor:

The metabolic parameters associated with gallstones have been the focus of numerous studies and remain an area of considerable interest. Kurt İnci et al. evaluated the biochemical parameters linked to gallstone disease, with a primary focus on serum RBP4. Their study did not reveal a statistically significant relationship between gallstones and RBP4, vitamin D, LDL, triglyceride, total cholesterol, uric acid, or HOMA-IR. Conversely, a positive correlation was observed between vitamin D levels and RBP4. This letter addresses potential confounding factors that may affect these relationships, particularly in relation to exclusion criteria and temporal mismatches. Gallstone disease is prevalent and clinically significant. Despite various studies exploring lipid levels, uric acid, and HOMA-IR, the presence of conflicting data underscores the necessity for more comprehensive retrospective or prospective research involving larger patient cohorts. The study conducted by Kurt İnci et al. and the valuable contributions of the authors will provide important insights that will guide the design of future prospective, multicenter, randomized studies.
Dr. Tolga Düzenli