

Prevalence of Metabolic Syndrome in Patients with Rheumatoid Arthritis

Romatoid Artritli Hastalarda Metabolik Sendrom Prevalansı

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Dear Editor,

We have read with great interest the study of Akbal et al.^[1] about the prevalence of metabolic syndrome in patients with rheumatoid arthritis. We believe that this study will be a significant contribution to the literature. However, we have some concerns about the study methods and evaluation of the findings.

It was stated that the control group enrolled in the study contained subjects who did not have inflammatory bowel disease. This is a poor description that fails to reflect the characteristics of the control group and doesn't clarify whether this population has other diseases or not. The authors have reported the prevalence of metabolic syndrome to be 16% in the control group with an average age of 49.8 years and gender distribution of 85.1% women. However, these findings do not match the data obtained from two large-scale epidemiological studies conducted in our country. The prevalence of metabolic syndrome among adult patients has been reported in two studies and the results are 37.1% in the TEKHARF study (Turkish Adult Risk Factor Survey) (in male patients 31.2%, in female patients 42.8%)^[2] and 33.9% in the METSAR study (Metabolic Syndrome Prevalence Survey in Turkey) (in male patients 28%, in female patients 39.6%). The prevalence of metabolic syndrome is known to increase with age and to be higher in women.^[3] Consequently, it is obvious that the evaluation of the study should be radically changed to reflect that the prevalence of metabolic syndrome in patients with rheumatoid arthritis is much lower than that of the overall population!

In the article, a correlation was reported between the use of corticosteroids and fasting blood glucose level, but it wasn't clarified whether or not there was a difference between corticosteroid use and triglycerides. Increased blood glucose is among the metabolic effects of corticosteroids while the most important dyslipidemic effect of corticosteroids is the heightened level of triglycerides.^[4,5] It is possible to attribute the increased level of triglycerides to steroids used by 54.9% of the patients. Therefore, we believe that comparing a group of patients using corticosteroids to healthy individuals who do not use corticosteroids and attributing the findings like high levels of triglyceride and blood pressure (which are well-known side effects of steroids) to the disease or the degree of activity of the disease can be misleading.

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Author's response

Dear Editor,

In response to the critique of our article, we would like to raise the following points. We did not say that "the control group enrolled in the study contained subjects who did not have inflammatory bowel disease."

The control group included those without rheumatoid arthritis (RA), Reiter disease, and ankylosing spondylitis and psoriatic arthritis and not only inflammatory bowel disease. In addition, arthritis

can be seen in various diseases including vasculitic syndrome, systemic lupus erythematosus, Sjogren's syndrome, liver diseases, renal diseases and metabolic diseases. These were excluded from the study.

Actually, the prevalence of metabolic syndrome (MS) was lower in our cohort compared to other studies as the TEKHARF and METSAR. We did not claim an elevated prevalence of MetS in RA; in fact, there was no significant difference between the groups. The authors state that "the evaluation of the study should be radically changed to reflect that the prevalence of MetS in patients with RA is much lower than that of the overall population." However, we found that the prevalence of MetS in both the RA and control groups was lower compared to the overall population. In addition, several studies indicated the prevalence of MetS was lower than in the TEKHARF and METSAR. Gündoğan et al.^[1] demonstrated that the prevalence of MetS was 28.8% (male, 23.1%; female, 33.5%) and Erem et al.^[2] reported that the prevalence of MetS was 26.9% (21.7% in male, 31.3% in female). Consequently, our study population may not reflect the overall population. However, each study should be evaluated against its own control group.

"We did not evaluate the correlation between use of corticosteroids and fasting blood glucose levels and other metabolic parameters." We reevaluated the relationship between use of corticosteroids and metabolic parameters and found no significant correlation. In our study, we found only significant differences in glucose levels in patients using corticosteroids. There was no difference in TG, HDL-C, hypertension and waist circumference between subjects using and not using corticosteroids. Previous studies reported that long-term corticosteroid use may disturb metabolic parameters, but there have been few studies evaluating the relationship between MetS and RA. Toms et al.^[3] demonstrated that long-term exposure to medium doses of corticosteroid is associated with the increased prevalence of high triglycerides and hypertension, but not with any of the other components (low HDL, obesity, and glucose

intolerance), or the presence of the MetS itself. In our study, patients receiving corticosteroids used a low dose (median corticosteroid dose was 7.0 ± 4.7 mg/day). Therefore we think that the metabolic changes were not due to the use of corticosteroids.

We observed significantly different prevalence rates of the MetS among different degrees of disease activity. Zonana-Nacach et al.^[4] found that in RA patients, MetS was related to pain and functional status suggesting disease activity in patients with RA. Karvounaris et al.^[5] demonstrated the correlation of RA disease activity with MetS. Similar to our results, this data suggests that RA disease activity correlates with MetS.

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