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Metabolic syndrome components including high abdominal obesity and sarcopenia in patients with inflammatory bowel disease

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In a recent article in this journal, Barroso *et al* [1] concluded that a high degree of abdominal obesity and sarcopenia in patients with medically refractory inflammatory bowel disease (IBD) signifies the potential importance of these findings in terms of the clinical course of IBD and the long-term effects, and thus should be investigated in future prospective studies.

In this respect, metabolic syndrome (MetS)—closely related to insulin resistance, the key component of MetS—is highly prevalent worldwide and its related morbidity include abdominal obesity, type 2 diabetes mellitus (T2DM), dyslipidemia, hypertension, nonalcoholic fatty liver disease, neurodegenerative diseases, cardio-cerebrovascular disorders, and malignancies, the endpoints of MetS [2-4]. Moreover, recent epidemiological evidence indicates that the prevalence of IBD and the rate of MetS-related obesity have increased substantially in the developed nations during the past half century, highlighting the significance of MetS in IBD patients [2,5]. Pathogenetic mediators in a milieu of chronic inflammation, inadequate immune response, oxidative stress, prothrombotic process, adipose tissue dysregulation, and changes in adipokines, involved in the MetS pathophysiology, could also be involved in the pathophysiology of IBD [2,6]. Specifically, all aforementioned MetS morbidities appear to contribute to IBD pathophysiology. For instance, obesity is connected with more active IBD and a reduction in the time span between diagnosis and surgery [5]; insulin resistance is associated with active and inactive IBD and offers evidence on the influence of inflammation and inflammation-related factors on arterial stiffening [7]; T2DM, IBD and colorectal cancer appear to share a common basis influenced by inflammatory processes, intestinal microbiota dysbiosis, and crosstalk between various signaling pathways [8]; and IBD patients have an increased risk of myocardial infarction, thromboembolic disorders (stroke), and cerebro-cardiovascular mortality, particularly during IBD activity [9]. Finally, since MetS is also associated with sarcopenia [10], the importance of these MetS-related parameters in terms of clinical IBD course and long-term outcomes should be investigated in future prospective studies.

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