EULAR Study Group on obesity, metabolic disorders and nutrition in rheumatic diseases

Study group leader
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Background
According to the World Health Organization (WHO) obesity represents one of the most important social health problems, because of its prevalence, which is progressively increasing, not only in the Occidental Countries, but also in those with lower gross domestic products (GDPs). The problem is consistent in Rheumatology because all rheumatic diseases may be affected by the biological effects of being obese or overweight, and unbalanced nutrition, given that the metabolic status produces a low-persistent inflammation that could add to the existing inflammation of the underlying disease thus contributing to an increase of the overall inflammatory burden. Overweightness and obesity represent the 5th most relevant risk factor of global mortality and the number of deaths have been recorded as up to 2.8 million/year in the world, because of its effects on type 2 diabetes, cardiovascular illnesses, cancer and aging processes (1,2).

When considering Rheumatoid Arthritis (RA) as one of the most disabling rheumatic diseases, some environmental risk factors have been well defined, with smoking playing a relevant role either as a risk factor for the occurrence as well as for the severity (3,4), yet studies have raised the hypothesis that obesity increases also the risk of developing the disease (5,6). This applies also to Psoriatic Arthritis (PsA) (7).

Moreover, metabolic disorders have been recently individualized as risk factors for the initiation and the progression of osteoarthritis, independently of the well-known mechanical role of obesity on weight-bearing joints (8,9).

Over the last 4 years it has become clear that overweightness and obesity determine a lower response to conventional therapies in RA, and to biological therapies in RA, Spondyloarthropathies (SpA) and PsA (10,11,12,13). Overall data suggest that obesity and unbalanced nutrition could be crucial targets, in order to improve the effectiveness of any intervention to reach the major goal, i.e. remission.

Several investigations in the last 5 years have shown that obesity may influence the activity of some rheumatic diseases, i.e. RA, but also psoriatic arthritis (PsA), and spondyloarthritis (SpA). Obesity represents also a major risk factor for the occurrence of osteoarthritis (14,15), and of incident hyperuricemia (16). Therefore it could really represent a target of intervention in order to downgrade the inflammatory status thus contributing to the much better control of the disease since its onset.

Given that obesity is one of the parameters of the metabolic syndrome, an intervention on obesity, could produce long lasting effects on insulin resistance and on the subsequent occurrence of cardiovascular illnesses. Along this line, a correct nutrition should become a critical tool to comprehensively approach all rheumatic patients being overweight or obese. An intervention on nutrition, however, could give benefits going beyond the weight control. For example, it has been clearly demonstrated that an important percentage of RA or Lupus patients present Vitamin D deficiency (VitDd) (17,18). VitD appears to be important not only from the theoretical point of view, given that VitD exerts suppressive function in inflammation (19,20), but also because it seems to associate with critical clinical problems in the daily care of patients, namely fractures in RA, thrombosis in Lupus Erythematosus and cardiovascular events (SLE) (21-24). Therefore, a comprehensive approach in all rheumatic diseases could allow to better control that part of the inflammation linked to the overweightness as well as that part which is linked to the VitD status.

Aims
The aims are to build awareness on the problem of overweightness and obesity in all rheumatic diseases, to build-up a consensus on how to deal in daily care with the problem and how to set-up a prospective evaluation of the effectiveness of an intervention in weight control and incorrect nutrition in all rheumatic diseases.

The steps that can be hypothesized could be:
1. Gather a group with published experience on the problem of obesity and related issues in rheumatic diseases
2. To define a literature search on all the data that have accumulated over the years on the effects of obesity, overweightness and unbalanced nutritional factors on the activity and the severity of rheumatic illnesses
3. To produce evidences on the effects of multinterventional approaches in the field of obesity and nutrition at the activity and severity levels in the different diseases
4. To produce evidence on the increased risk of orthopedic surgical interventions in obese vs normal
weight people
5. To produce recommendations on how to approach the problem including a correct early education among young populations
6. To define prospective studies to assess the efficacy of the intervention on clinical grounds

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The study group is open for new members continually and we hope to expand the network and encourage wider representation from more EULAR member countries as far as possible.

Prof. G.F. Ferraccioli
References
2. Flegal KM, Kit BK, Orpana H, Graubard BI: Association of all cause mortality with overweight and obesity using standard body mass index categories. JAMA 2013; 309: 71-82