



Disability in obesity with comorbidities. A perspective from the PRM Societies

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Obesity is the most representative of new and increasing health problems in the developed Countries (mainly in Europe and Americas); the obesity rates have more than doubled since 1980, with 1 in 10 of the world's adult population now obese.¹ A systematic review demonstrated that obesity accounts for 0.7-2.8% of direct health care expenditure in many developed countries but could be as high as 7% in the USA.² Obesity is a long-term disease with high comorbidity such as type 2 diabetes mellitus, hypertension and cardiovascular disease, obstructive sleep apnoea syndrome and obesity hypoventilation syndrome with considerable impact on disability, and quality of life. The simultaneous complain of more conditions may be additive in determining disability and tip the balance of independence.³ In an Italian National Health Survey⁴ on the general population, osteoarthritis was the most common disease across all BMI classes in both genders (women 27.9% *vs.* 16.4% in men), with a striking 50.1% prevalence among severely obese women. In our experience, we found the distribution of comorbidities in obese patients admitted for rehabilitation as reported in Figure 1.

The World Report on Disability⁵ defines poverty as a major cause of disability, together with environmental conditions, economic, social and cultural barriers, education, research and health services. Using the ICF (International Classification of Functioning, Disability and Health), it appears that the most impaired functions are

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referred to chapter b2 – sensory functions and pain, and to chapter b7 – neuromusculoskeletal and movement-related functions; the most impaired structures are referred to chapter s8 – skin and related structures. The most limited activities are referred to chapters d2 –

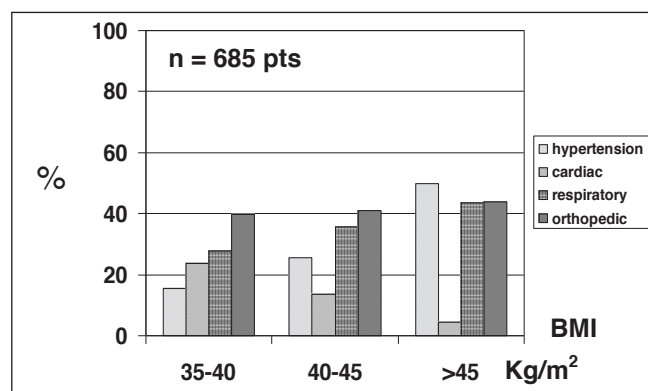


Figure 1.—Distribution of comorbidities in obese patients.

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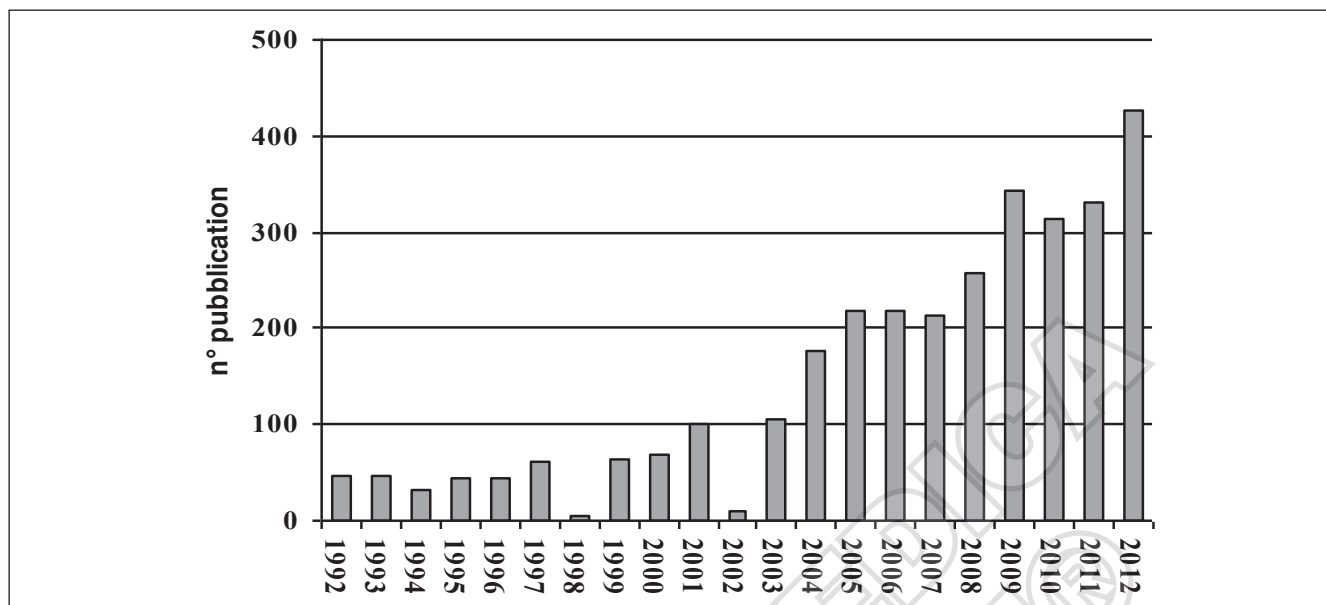


Figure 2.—Number of articles related to rehabilitation and obesity.

general tasks and demands and d4 – mobility. The most extended facilitators are referred to chapter e1 – products and technology; for barriers are referred to chapter e2 – natural environment and human-made changes to environment. Furthermore, results from a meta-analysis of cross-sectional studies revealed a graded increase in the risk of ADL limitations from overweight (1.04, 95% confidence interval [CI] 1.00-1.08), class I obesity (1.16, 95% CI 1.11-1.21) and class II+ obesity (1.76, 95% CI 1.28-2.41), relative to normal weight.⁶

Given the figures of obesity worldwide, its impact on Disability and burden and on the National Health Systems in so many countries, it appears necessary to face this problem with the tools and methodology recommended by the World Report. In the last two decades, there has been a significant growth in the number of articles related to “rehabilitation and obesity” (Figure 2).

It appears now important for Rehabilitation specialists to make some statements regarding what can be done rehabilitation wise to counteract the disabling consequences of severe obesity.

The Italian Society of Obesity (SIO) and Italian Society of Eating Disorders (SISDCA) have published in 2010 a document where the rationale and the criteria of the comprehensive rehabilitation for the obese patient were described.⁷ In this document, it is stated that the rehabilitative approach should be

multidisciplinary and integrated in relation to the clinical complexity of obesity. Also, the need for multiple settings in relation to the phases of instability of the condition and to the onset of a rehabilitative process. It is therefore mandatory to assess quality of life, disability, motor function (muscle strength, balance, tolerance to effort) and musculoskeletal problems (articular pain, limitations of the range of motion) as recommended by the Standard Italiani per la Cura dell’Obesità S.I.O./A.D.I. 2012/2013.⁸

Meanwhile, the Italian Ministry of Health with the Piano d’indirizzo per la Riabilitazione in 2011⁹ and the Quaderno del Ministero della Salute n. 10 in 2012¹⁰ has acknowledged the need for a rehabilitation pathways for severely obese patients with comorbidities with multiple rehabilitative settings according to the severity of disability. The document stated that “the particular characteristics of morbid obesity as a chronic disease, its comorbidities and consequential disabilities that negatively impact both quality of life and health expenditure calls for an approach that also involves rehabilitation and not just treatment alone”. It is, therefore, important to devise and develop pathways of care based on a multidisciplinary approach that not only deal with the weight issue over a longer period, but, above all, prevent and treat its complications.

In May 2013, delegates of the Italian Society of

Physical and Rehabilitation Medicine (SIMFER), the Italian Society of Obesity (SIO) and the Italian Society of Eating Disorders (SISDCA) have joined in a panel of experts to discuss a consensus document on the organizational requisites of rehabilitation units devoted to patients affected by severe obesity with comorbidities (11). The complexity of the multidisciplinary rehabilitation interventions calls for treating disabling obesity in different settings. In particular, severe obesity with comorbidities requires admission to hospitals structurally adequate to the needs of patients with excess of body mass with availability of bariatric lifting and transferring aids. Such hospitals should be linked in a continuum of care to specialistic facilities and surgeries in the territory providing rehabilitation treatments at lesser intensity.³

In Turkey, an Obesity Rehabilitation Study Group was founded under the umbrella of Turkish Society of Physical Medicine and Rehabilitation in May 2013. The aim of this group is to increase awareness about obesity among PMR specialists and the public opinion.

In June 2013, the International Society of Physical and Rehabilitation Medicine (ISPRM) started a Special Interest Group on Rehabilitation in Obesity and Metabolic Conditions with the aim of gathering existing related national guide lines and documents and preparing guide lines endorsed by ISPRM.

The third 2013 issue of the European Journal of Physical and Rehabilitation Medicine, hosted a Special Section focused on Rehabilitation in Disabling Obesity with contributions from Italy, United States and Brazil.¹²⁻¹⁴ This has been a grey area in Rehabilitation literature which needs now to be put further in focus by PRM specialists worldwide. Multidisciplinary has always been a milestone in Rehabilitation, but its "ingredients" need to be adapted to the underlying conditions and disability. The rehabilitation pathway of the obese patient is characterized by the integration of nutritional, rehabilitative, psycho-educational, rehabilitative nursing. Not being specifically related to an acute event, the intensity of the interventions should depend on the level of severity and comorbidities, frailty of the psychic status, degree of disability and quality of life of the patient. Intensive rehabilitation interventions are directed to the treatment of obesity and related conditions and to the recovery of major disabilities susceptible of modifications which require specialized medical

rehabilitative and therapeutic care in terms of complexity and/or duration of intervention.

Rehabilitation is about recovering function and minimizing disability. We need more data on the effects of different rehabilitation programs on disability, because of the paucity of disability measurements and longitudinal studies. Also, clinical and Rehabilitation Units with optimal standards for the treatment of pathological conditions and their functional consequences in normal-weight patients are often structurally and technologically inadequate for the care of patients with extreme obesity. Appropriate therapeutic and rehabilitative protocols carried out by specially trained operators, an ergonomically adequate and safe environment for both patients and staff alike, with an adequate presence of bariatric aids for lifting and transferring, are needed.

One purpose of the present Letter is to further raise the awareness of Rehabilitation specialists on the special organizational considerations related to the Rehabilitation of these complex patients. They require a here-and-now multidimensional approach with the simultaneous provision of physiotherapy, diet and nutritional support, psychological counseling, adapted physical activity, specific nursing skills. A truly multidimensional approach able to provide front line assessment and preventive strategies, risk stratification, and disease management is needed and for that purpose, a team approach and the integration of several medical specialties, including clinical nutrition, endocrinology, psychiatry, psychology, rehabilitation medicine, and different health professions, including dietitians, psychologists, physiotherapists and nurses is required. Another aim of the Letter is to stimulate a confrontation of PRM specialists in Europe and around the world in the evaluation of their respective Rehabilitation Services with regard to those issues and also to gather information and different experiences on the approaches to Disability in severe/comorbid Obesity.

The specialty of PMR is entering into an unprecedented period with a unique opportunity; few other medical specialties are as well qualified to address the problems of obesity. For many physiatrists, however, the prescription of exercise for obese individuals will be venturing into a different realm of practice, beyond their ordinary experience and possibly beyond their comfort zone.¹⁵ Some may feel the need to reinforce and further develop their skills in specific areas of exercise application for these popu-

lations. PMR in general will benefit from widespread education and research efforts in the area of obesity. It is a task well worth undertaking, for the benefit of our patients. Are we up for the challenge?

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