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Short Communication

Sarcopenic Obesity in Indian Context: A Concise Review

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Abstract

Background: For decades, autism disorders have been considered life-long disorders without curative therapies despite a variety of medications have been tried including pyridoxine, magnesium, thiamine, biotin, folic acid, and omega-3. However, we have recently described a new therapeutic approach aiming primarily at improving and curing the two major diagnostic features of autism which are poor responsiveness to their name and poor eye contact. The first book which described the cure of the autistic features was included in Book authority's lists best books of all time. Therefore, we have been consulted about the treatment of autism from many countries in the world including the United Kingdom, Canada, United Arab of Emirate, Tunisia, Palestine, India, and Pakistan, and many of the international cases have been reported.

Patients and methods: During November, 2023, we received a consultation about the possible treatment of a three and half year's girl from Cuba who was diagnosed with autism at about the age of three years. She has been treated mostly with supplements including thiamine (Vitamin B1), Biotin, and vitamin B6 daily. She was also receiving other treatments without any known scientific basis including homeopathic carcinosin, topical lugol iodine solution 1% (One drop daily), and Tibetan precious pill (Rinchen Ratna Jamphel) which was prescribed by the Tibetan Medical Institute.

Results: At the age of three and half years (November, 2023), she was still having the two major diagnostic features of autism which are the lack of appropriate responsiveness to own name, and the lack of eye contact. She was able to go to the toilet and possibly know about 100-150 words. However, she was saying mostly words like mama, juice (to ask for a juice), and bye-bye. She was also talking with herself most of the time, saying unintelligible words and meaningless sounds. She was capable of holding a pen and drawing circular figures and other things. She was also capable of identifying letters. She was able to eat with a spoon, but she needed help with hand washing. She was also able to announce her need to go toilet and she could go to toilet, but she was needing help with clothes after she has been in the toilet. Therefore, she had acceptable fine motor skills and adaptive behaviors and her disorder was considered to be associated with normal intelligence. Therefore, the patient received a provisional diagnosis of classic autism and the initial recommended evidence-based treatment included courses of intramuscular cerebrospinal and oral risperidone. After one month of treatment the parents reported great improvements that made risperidone no longer necessary, her behavior was better and she started talking more. The major diagnostic features of autism have disappeared. She began talking with sentences and using more verbs.

Expert opinion: The current evidence-based expert opinion suggests that the individualized use of courses of intramuscular cerebrospinal can be in this case of autism with the aim curing the major diagnostic features of autism. Citicoline treatment can be considered in this patient to improve speech after the occurrence of improvement in autistic features and hyperactivity.

Keywords: autism; evidence-based treatment; expert opinion

Introduction

Sarcopenic obesity, characterized by the simultaneous presence of low muscle mass and high body fat, has emerged as a significant public health concern globally. This condition, often associated with aging, sedentary lifestyle, and poor dietary habits, presents unique challenges in both diagnosis and management.

Pathophysiology:

The pathophysiology of sarcopenic obesity involves complex interplay between muscle wasting, adiposity, inflammation, and metabolic dysregulation [1]. Age-related hormonal changes, particularly alterations in growth hormone and insulin-like growth factor-1, play pivotal roles in the development of sarcopenia and obesity.

Diagnostic Criteria:

Several diagnostic criteria have been proposed for sarcopenic obesity, including those based on imaging modalities such as dual-energy X-ray absorptiometry (DEXA) and bioelectrical impedance analysis (BIA), as well as anthropometric measurements like waist circumference and waist-to-hip ratio [2].

Clinical Implications:

Sarcopenic obesity is associated with an increased risk of various adverse health outcomes, including cardiovascular disease, type 2 diabetes, functional decline, and mortality [3]. Early detection and intervention are crucial in mitigating these risks and improving overall prognosis.

Management Strategies:

Lifestyle modifications, including regular physical activity and dietary interventions aimed at preserving muscle mass and reducing adiposity, form the cornerstone of management for sarcopenic obesity [4]. Resistance training, protein supplementation, and pharmacological interventions may also be considered in certain cases.

Epidemiology of Sarcopenic Obesity in India:

Limited epidemiological data exist on sarcopenic obesity in India. However, emerging evidence suggests a rising prevalence of obesity and associated metabolic disorders in the Indian population, particularly among urban residents and older adults. The traditional Indian diet, characterized by high carbohydrate and low protein intake, may contribute to the development of sarcopenic obesity [5,6]. YY phenomenon or paradox has been considered when two or more people have same anthropometrically derived index but have different body composition parameter.

In any population study of body composition parameters, two or more people of same or different sex with varying body compositions will share some of the values of the parameters under study. This is a confounder but it provides an opportunity to establish the YY paradox as a predictor for disease linked easily measurable index. As such a study of such phenomenon may yield substantial benefits to public health (7). YY paradox prevailed in anthropometric data and body composition indices of women. This type of data does not follow the normal Gaussian distribution and it is also felt that a deeper look in this aspect could be used for deriving predictive models for anthropometric mark-ers linked to various diseases [8]. As per Pal et al study the prevalence of SO in healthy elderly Indian adults (≥ 65 years) is 5.4%–6.3% using indigenous Asian-Indian cut-offs. Nearly one-fourth of subjects with sarcopenia have accompanying obesity, necessitating screening for sarcopenic obesity in all adults with sarcopenia. Either BMI or WC or FM% (derived from DXA) can be used to identify individuals with sarcopenic obesity; however, FM% may be a better predictor of physical performance and functional outcomes and may be clinically more relevant. In the absence of any data on SO from the Indian subcontinent, the present study is likely to lead the way to large-scale observational and interventional studies in the future [9].

Research Needs

Further research is needed to elucidate the underlying mechanisms of sarcopenic obesity and develop more effective strategies for its prevention and management. Targeted interventions tailored to individual patient profiles, as well as multidisciplinary approaches involving healthcare professionals from various specialties, hold promise in addressing this complex condition. Further research is warranted to better understand the epidemiology and determinants of sarcopenic obesity in diverse Indian populations. Longitudinal studies assessing the impact of dietary patterns, physical activity levels, and sociodemographic factors on muscle mass and adiposity are needed. Additionally, randomized controlled trials evaluating the effectiveness of lifestyle interventions and pharmacological approaches tailored to the Indian context are essential for informing evidence-based management strategies.

Conclusion:

Sarcopenic obesity represents a growing public health challenge with significant clinical implications. By understanding its pathophysiology, implementing appropriate diagnostic criteria, and adopting evidence-based management strategies, healthcare professionals can effectively address the needs of individuals affected by this condition and improve their overall health outcomes. Sarcopenic obesity poses a growing health challenge in India, necessitating comprehensive strategies for prevention and management. Addressing the unique cultural, socioeconomic, and healthcare-related factors influencing this condition is crucial. By adopting a multidisciplinary approach involving healthcare professionals, policymakers, and community stakeholders, India can effectively mitigate the burden of sarcopenic obesity and improve population health outcomes.

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