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Clinical Reviews and Case Reports

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Editorial

Sarcopenia in Elderly Patients with Type 2 Diabetes Mellitus as Risk Factor

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Received Date: April 09, 2024 | Accepted Date: April 25, 2024 | Published Date: May 06, 2024

Citation: Carmine Finelli, Simone Dal Sasso, (2024), Sarcopenia in Elderly Patients with Type 2 Diabetes Mellitus as Risk Factor, *Clinical Reviews and Case Reports*, *3*(3); **DOI:**10.31579/2835-7957/083

world's fast aging population. The two primary pathways in the pathophysiology of type 2 diabetes are insulin resistance in target tissues and insulin insufficiency, which is brought on by islet β cell failure [1]. Apart from the triadvirate of muscle, liver, and β cell, other factors that contribute to the development of glucose intolerance in type 2 diabetics include fat cell (accelerated lipolysis), gastrointestinal tract (incretin deficiency/resistance), α-cell (hyperglucagonemia), kidney (increased glucose reabsorption), and brain (insulin resistance) [2]. In addition, a significant prevalence of malnutrition is linked to diabetes in elderly patients [3]. In elderly patients with diabetes, malnutrition may have a detrimental effect on the pathophysiology of the condition as well as the morbidity and death rate [4]. Due to the consequences of glucotoxicity, increased inflammation and oxidative stress, and diabetic neuropathy, elderly people with T2DM are more likely to experience decreased skeletal muscle mass, muscle weakness, and poor physical function [5, 6]. As a result, maintaining muscle mass or function is crucial for senior diabetes mellitus patients [7]. Higher prevalence rates of comorbidities, such as malignant tumors, chronic kidney disease, and chronic heart failure, are also present in elderly individuals with diabetes mellitus [8]. These conditions might affect appetite, cause weight loss, and cause a reduction in food consumption. Sarcopenia, or malnutrition, is a significant geriatric condition linked to diabetes mellitus in the elderly [9]. Muscle weakness or diminished physical function linked to aging-related muscle mass loss, chronic inflammation, elevated oxidative stress, reduced physical activity, and malnutrition are the hallmarks of sarcopenia [10]. On the other hand, malnutrition is a state marked by deficiencies in calories and protein associated with appetite reduction brought on by age, metabolic disorders, or malabsorption [11]. Additionally, recent development of diagnostic criteria for cachexia has drawn attention to the significance of the illness, wherein inflammation resulting from malignant tumors and chronic diseases is identified as an underlying pathological condition [12]. A reduction in everyday activities, fractures of the bones, admission to the hospital, long-term hospitalization, greater healthcare costs, and a rise in death rates are all associated with sarcopenia, malnutrition, and cachexia [13]. Therefore, it is crucial to diagnose and treat these disorders in elderly patients with diabetes mellitus as soon as possible. Patients with T2DM are more sarcopenic than the other hospitalized patients, yet they are malnourished to a similar extent [14, 15]. A worse prognosis is determined by comorbidities, inflammation, and sarcopenia [15]. Patients may have a better prognosis if malnutrition and sarcopenia are actively and promptly identified, followed by appropriate treatment [15]. Bioelectrical impedance analysis (BIA) is a method used to detect changes in body composition. The data indicates that BIA may not be the best method for differentiating between older people with and without diabetes mellitus because of its susceptibility to several variables, such as variations in glucometabolic and cardiovascular regulation [16]. Recently, it showed that elderly people diagnosed with T2DM who also have sarcopenia or malnutrition are more likely to require longer hospital stays and to die within a year of being released from the hospital [17]. Another, it is unknown how vitamin D deficienty (VDD) affects both major and tiny nerve fiber damages in older T2DM patients [18]. In fact, there is a direct correlation between VDD and an increased risk of diabetic peripheral neuropathy (DPN). VDD may influence big nerve fibers, which may facilitate the production of DPN [18]. Sarcopenia is becoming more common in elderly with T2DM patients, which is concerning for public health because it significantly lowers quality of life. A sufficient attention should be given also to sarcopenia as risk factors in elderly with T2DM. A multidisciplinary approach including medication, diet, exercise, and the right daily routine is necessary for effective diagnosis and management. Therefore, further study is required to comprehend the underlying mechanisms and enhance diagnostic and treatment approaches in elderly with T2DM.

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