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Revolutionising Cancer Cachexia Care: Virtual Reality Interventions for Enhanced Patient Outcomes

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ABSTRACT

Cancer cachexia is a debilitating condition which leads to wasting of muscles, weight loss, and a decline in quality of life. Cancer cachexia is a multifactorial condition that leads to enhanced functional impairment and is defined by an ongoing loss in skeletal muscle mass that is not fully reversed by conventional nutritional treatment. It is necessary to diagnose or treat refractory cachexia early as associated muscle wasting is not completely understood. This highly impacts the patients' Quality of Life (QoL). Exercise Rehabilitation proves to be an effective management strategy to improve QoL. This includes aerobic, resistance, flexibility, and neuromuscular training. Exercise rehabilitation has been shown to significantly improve Cancer-Related Dysfunctions (CRDs). Virtual Reality (VR) is a software application that allows users to navigate through and interact with a virtual environment nearly in real time. Virtual Reality (VR), exercise, nutritional therapy, psychosocial assistance, and pharmacological therapy are the interventions involved in cancer cachexia intervention. The aim of the study is to figure out the impact of VR based interventions on improvement of outcomes of patients suffering from cancer cachexia. This review utilised PubMed, Google Scholar, and Cochrane to search relevant full texts literature and identified 30 studies from the last 10 years comprising randomised controlled trials, qualitative studies, and systematic reviews. After removing duplicates, 15 articles were found to be pertinent to the review.Patients who went through VR based intervention showed a significant improvement in muscle strength, functional ability and overall QoL. This review finds that interventions using VR gave significant promise to the intervention of cancer cachexia, the condition that severely affects cancer patients' quality of life by causing fatigue, muscle wasting.

Keywords: Functional ability, Muscle strength, Patient outcomes