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RESISTANCE TRAINING IS KEY TO MAINTAIN AND IMPROVE MUSCLE MASS AND WHOLE BODY PHASE ANGLE DURING AND AFTER TREATMENTS FOR A HODGKIN'S LYMPHOMA PATIENT

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Introduction
Exercise interventions are feasible and safe for patients with malignant lymphomas, with no evidence of increased adverse events. Allogeneic hematopoietic stem cell transplantation is a demanding therapy that significantly affects quality of life (QOL) and is associated with reductions in respiratory function, muscle strength and exercise capacity. Resistance training (RT) has demonstrated safety and efficacy in attenuating cancer-related adverse effects such as fatigue, decreased physical functioning and reduced health-related QOL. Precise manipulation of training variables is essential to optimize clinically relevant outcomes.

Case Report
A 35-year-old female presented at The Strength Clinic in November 2019 with a history of Hodgkin's Lymphoma diagnosed in 2016 treated with chemotherapy and radiotherapy. After relapse in 2019, she underwent an autologous bone marrow transplant in August. Functional evaluation identified multiple movement dysfunctions associated with muscle weakness. InBody770 analysis showed low muscle mass and low whole-body phase angle (WBPA), which is linked to decreased strength, poorer QOL and increased mortality in cancer patients. She initiated an RT program focused on strength development. A new relapse occurred in January 2020, requiring immunotherapy, followed by another relapse in October. Additional immunotherapy preceded an allo-transplant from a fully compatible donor in March 2022, resulting in seven months of detraining. In February 2023, she developed Graft-Versus-Host Disease, interrupting training for one month and necessitating high-dose cortisone. Upon resuming training, decreases in muscle mass, elevated Extracellular Water Ratio and persistently low WBPA were noted. In June 2025, she was diagnosed with Mucoepidermoid Carcinoma of the parotid gland and treated. Despite these challenges, she maintained twice-weekly training, achieving improvements in muscle mass, WBPA, inflammation markers and self-reported QOL.

Conclusion
In this patient, structured RT effectively improved muscle mass, phase angle, strength and physical performance during and after lymphoma-related treatments. RT conducted alongside medical therapy and peri-transplant was feasible and safe.

Keywords

Resistance Training, Hodgkin's Lymphoma, Whole Body Phase Angle, Muscle Mass

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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