

Exercise Prescription for and Outcomes of a Cardiovascular and Cerebral Misfunction Case

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ABSTRACT

HISTORY: A Caucasian 62-year-old male was admitted in the emergency room with complaints of chest discomfort. Patient was experiencing weakness on the left side of his body and was considered medically paralyzed. Patient was experiencing seizures that occurred 1 month ago due to heart conditions and in the last two weeks he experienced another stroke. History consisted of cardiovascular disease, cancer and coronary artery disease and smoking for 25 years. In 2011, patient had a defibrillator and pacemaker put in. August of 2016, patient had gone through ventricular fibrillation and resulted in a stent placement. In 2017, patient experienced a stroke that affected his left side. In 2018, patient had a left ventricular assist device (LVAD) placed, which is currently still present. **PHYSICAL EXAMINATION:** Patient weights 65.1 kg, is 170 cm tall, blood pressure is 230/112. **DIFFERENTIAL DIAGNOSES LIST:** Patient has diagnosed of coronary artery disease, heart failure, and non-Hodgkin lymphoma. **DATA:** Patient had a 24% ejection fraction. **FINAL WORKING DIAGNOSIS & TREATMENT:** Coronary artery disease and stroke with a left side deficit. Patient enrolled in Resolution Cardiovascular Rehabilitation for seven months and he is following the cardiac rehab program three times a week. Patient's goals were to improve balance, walk longer distances and increase strength. Program's main rehabilitation was to improve patient's balance and bilateral strength in addition to strengthen his heart in order to perform a heart transplant. Cardiac rehab team is focused to strengthen the muscles of the right (unaffected) side of his body in order to compensate for the left (affected) side. The exercise prescription focuses on cardiovascular and weight bearing exercises. He has been working on 6-minute walks, Nu-step for 20 minutes, lower and upper body exercises. During weight bearing exercises patient performs with heavier weight on his right side. During exercises like the leg extension machine, patient exerts and controls weight with right leg but uses left leg to the best of his ability. In order to assess improvements between the left and right side strengths, unilateral exercises are performed. Cardiovascular exercises are done to increase patient's endurance and promote improvement in posture. Patient's LVAD placement elicits pain due to involved muscle tissue in the abdomen and due to unstable posture while walking. Patient is to be walking and attempting to be independent at home for a continuation of what is learned in rehab. **OUTCOME:** Patient has increased weight bearing abilities for left and right side. Patient is able to walk 90ft continuously, is experiencing less pain from LVAD and maintains better posture. Continuation of improvements are predicted if patient continues to attend and put effort in exercising that will promote strengthening of his heart for future heart transplantation.