

RESEARCH ARTICLE

BALANCE TRAINING WITH CORONARY ARTERY BYPASS GRAFT SURGERY PATIENTS

MINI REVIEW

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ABSTRACT

The surgical operation known as a "cabbage" or Coronary Artery Bypass Graft (CABG) is performed to treat coronary artery disease (CAD). In order to bypass a blocked or partially obstructed artery in the heart, a healthy blood vessel is transplanted during this surgery. By increasing blood flow to the heart muscle, the new channel lessens symptoms like breathlessness ,chest pain,disturbed balance and in ability to walk . However, there are numerous side effects from surgery, including postural instability and risk of fall . which can eventually lead to decrease quality of life and functional capacity and increase length of hospital stay. It has been demonstrated that cardiac rehabilitation and balance exercise interventions may change length of hospital stay in patients after CABG. Regular exercise has been reported to improve these patients' balance, functional capacity , length of hospital stay, and quality of life. So balance exercises and cardiac rehabilitation exercises are used to improve postural balance and functional capacity in post CABG patients.

Keywords: Balance exercise, cardiac rehabilitation, CABG, CAD.

INTRODUCTION

Atherosclerosis, a process when plaques or atheroma obstruct coronary arteries, causes cardiovascular illnesses. [1]

The goal of coronary bypass grafting surgery (CABG) is to supply an appropriate coronary artery (≥ 1.5 mm in diameter) with increased blood flow to ischemic heart disease-affected areas. [2]

The preferred course of treatment for multivessel coronary artery disease (CAD), particularly in individuals with diabetes or ischemic heart failure, is coronary artery bypass graft (CABG) surgery [3].

Over half of the 9 million deaths a year are attributable to atherosclerotic cardiovascular disease, which is in turn caused by environmental exposures. [4]

claimed Using the support and coordinated action of muscle groups, postural control is the act of maintaining, obtaining, or restoring a state of equilibrium throughout any posture or activity [5].

Impaired balance can lead to a dread of falling, which in turn lowers quality of life and makes it harder to carry out everyday tasks. [6]

Balance exercise improves balance, cognitive functions, as well as quality of life, balance and coordination exercise may result in greater improvement in the quality of life. [7].

Both physical performance and balance, which are critical components in preventing falls, can benefit from balance training. [8]

Enhanced functional mobility, less discomfort, better cognitive function, increased cardiovascular endurance, and overall functional independence were the goals of physical therapy treatment. [9]

For individuals with coronary artery disease, cardiac rehabilitation is an effective non-pharmacological strategy that can enhance their general health and cardiopulmonary fitness. Following a coronary bypass graft, patients can restore their voluntary physiological, psychological, vocational, and educational status with the use of planned cardiac rehabilitation. When compared to regular medical care, cardiac rehabilitation plays a significant role in reducing mortality rates by 26% [10].

Healthcare professionals should be aware of the significance of cardiac rehabilitation and should use it more regularly [11].

DISCUSSION

The balance training enhances walking ability (step length, gait speed, cadence, and double-limb support period) as well as increase balance berg scale (BBS) ($p = 0.001$). [12]

the sit-to-stand (STS) test has been widely employed across a wide range of chronic conditions, and its properties have been investigated. [13].

The SF-36 questionnaire is also a commonly used generic quality of life instrument and includes 36 questions over 8 domains. the physical and mental domains and transforming these into summary t scores ranging from 0 to 100 with higher scores denoting higher quality of life [14].

early rehabilitation beginning within 3 days of CABG prescribed by physicians or therapists was significantly associated with improved ADLs at discharge after the CABG [15]

post-CABG balance deficits is physical deconditioning, which can last for several weeks. Furthermore, cardiac surgery can worsen pulmonary function, and respiratory

muscle dysfunction and postoperative pulmonary complications may, in turn, influence functional capacity and balance. Additionally, postsurgical disability has been shown to be associated with cardiac disease. Therefore, this disability may also contribute to poor balance control. A diminished ability to maintain balance is associated with an increased risk of falling, bone fracture, joint dislocation, concussion, and even death [16]. So early balance training can affect the functional capacity, quality of life and length of hospital stay.

CONCLUSION it was concluded that early rehabilitation after CABG surgery via balance exercises could have beneficial effect on improving postural balance, patient's functional capacity which in turn reflect to better quality of life. Balance exercises should be viewed as a safe, non-invasive therapeutic option which could be implemented as a routine practice along with traditional cardiac rehabilitation physiotherapy in CABG patients.

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