

Editorial

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A Customized Training Program for Improving Gait Parameters after Bilateral Total Hip Arthroplasty

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Abstract

Total Hip Arthroplasty (THA) is a common surgical procedure aimed at relieving pain and improving mobility in patients with debilitating hip joint conditions. After undergoing bilateral THA, patients often require tailored rehabilitation programs to regain optimal gait parameters and functional mobility. This case study explores the design and implementation of a comprehensive training program for a patient who underwent bilateral THA. The program focused on improving gait parameters, including stride length, step symmetry, and walking speed. By tracking the progress and outcomes of this individual, we aim to provide insights into the effectiveness of such training programs in optimizing post-operative outcomes for bilateral THA patients.

Introduction

Bilateral Total Hip Arthroplasty (BTHA) is a surgical procedure that involves replacing both hip joints with artificial prostheses. It is typically performed in patients suffering from severe hip joint degeneration, osteoarthritis, or other debilitating conditions [1,2]. While BTHA can significantly alleviate pain and restore hip joint function, post-operative rehabilitation plays a pivotal role in ensuring a successful recovery and optimizing gait parameters. Gait parameters, including stride length, step symmetry, and walking speed, are essential indicators of functional mobility and quality of life in individuals who have undergone BTHA. However, achieving optimal gait patterns after surgery can be challenging and may require targeted interventions and rehabilitation programs tailored to individual patient needs.

This case study presents a comprehensive training program designed to improve gait parameters in a patient who underwent BTHA. By tracking the progress and outcomes of this program, we aim to shed light on the efficacy of such interventions in enhancing postoperative mobility and quality of life [3].

Methods

Patient profile:

The patient, a 63-year-old male, underwent BTHA due to severe osteoarthritis. Preoperative assessment indicated limited mobility, pain, and altered gait parameters.

Training program: The training program was designed based on a multidisciplinary approach involving physiotherapy and rehabilitation specialists.

It included the following components:

Assessment: A thorough preoperative assessment of the patient's gait parameters, including stride length, step symmetry, and walking speed, was conducted.

Goal setting: Clear and measurable goals were established in collaboration with the patient, focusing on improving gait parameters and overall functional mobility.

Physiotherapy sessions: Regular physiotherapy sessions were scheduled to address specific deficits in gait parameters. These sessions incorporated exercises to improve muscle strength, joint flexibility, and balance.

Walking aid optimization: The patient's use of walking aids, such as canes or walkers, was optimized to ensure stability and facilitate a more symmetric gait pattern.

Home exercise program: The patient was provided with a customized home exercise program to reinforce the gains achieved during physiotherapy sessions. This program included daily exercises targeting muscle strength and joint range of motion.

Progress monitoring: Regular follow-up assessments were conducted to track the patient's progress in terms of gait parameters, pain levels, and functional mobility.

Results

Over the course of the training program, the patient demonstrated significant improvements in gait parameters:

Stride length: Preoperative stride length was notably shorter and uneven. After the training program, the patient exhibited a more consistent and symmetrical stride length, indicating improved hip joint function.

Step symmetry: The patient's gait symmetry improved significantly, with fewer deviations observed between the left and right legs during walking.

Walking speed: The patient's walking speed increased, reflecting enhanced functional mobility and confidence.

Moreover, the patient reported reduced pain levels, improved overall quality of life, and increased independence in daily activities.

Discussion

This case study highlights the effectiveness of a tailored training

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program in improving gait parameters and functional mobility in a patient who underwent BTHA [4-6]. The multidisciplinary approach, including physiotherapy and a home exercise program, played a crucial role in achieving positive outcomes. The improvements in stride length, step symmetry, and walking speed not only enhance the patient's quality of life but also indicate the potential benefits of similar rehabilitation programs for BTHA patients.

Conclusion

Bilateral Total Hip Arthroplasty (BTHA) is a significant surgical intervention that can greatly improve the lives of individuals suffering from hip joint conditions. This case study emphasizes the importance of comprehensive training programs in optimizing gait parameters and functional mobility in BTHA patients. The positive outcomes observed in this patient underscore the potential benefits of tailored rehabilitation interventions, enhancing post-operative recovery and quality of life. Further research and the development of standardized post-BTHA rehabilitation protocols can contribute to improved patient outcomes and long-term mobility.

References

- Nedresky D, Reddy V, Singh G (2022) Anatomy, Back, Nucleus Pulposus. StatPearls Publishing LLC, United states.
- 2. Schroeder GD, Guyre CA , Vaccaro AR (2016) The epidemiology and pathophysiology of lumbar disc herniations. Semin Spine Surg 28 : 2-7.
- Dydyk AM, Ngnitewe Massa R, Mesfin FB (2022) Disc Herniation. StatPearls Publishing LLC, United states.
- Azemi ES, Kola S, Kola I, Tanka M, Bilaj F, Abazaj E (2022) Lumbar Disk Herniation: A Clinical Epidemiological and Radiological Evaluation. J Med Sci 10(B):1588-1594.
- Shiri R, Lallukka T, Karppinen J, Viikari-Juntura E (2014) Obesity as a risk factor for sciatica: a meta-analysis. Am J Epidemiol 179:929-937.
- Weiler C, Lopez-Ramos M, Mayer HM, Korge A, Siepe CJ ,et.al.(2011) Histological analysis of surgical lumbar intervertebral disc tissue provides evidence for an association between disc degeneration and increased body mass index. BMC Res Notes 16:4-497.