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Case report on a two-phase multidisciplinary rehabilitation program for a patient with multiple disabilities

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Introduction

Pituitary adenoma, a noncancerous tumor of pituitary gland, may lead to visual impairment such as reduction in visual acuity and deficit in visual field. Surgical incision of adenoma is one of the effective treatments. However, surgical removal increases the potential risk of vascular complications, further impairing the patient's body coordination, physical and cognitive functions. To manage patients with multiple disabilities, co-management between occupational therapists and optometrists is essential to improve the recovery progress.

Objectives

To demonstrate the importance of multi-disciplinary co-management in helping a patient with multiple deficits in physical, cognitive, and visual perspectives.

Methodology

A patient with history of pituitary adenoma and secondary stroke was co-managed by occupational therapists and optometrists. The first phase 6-month rehabilitation, conducted by occupational therapists, included training on body coordination, grip strength, eye-hand coordination and cognition. The second phase 10-month rehabilitation, carried out by optometrists, consisted of prescription of spectacles with Fresnel prism for field expansion and peripheral awareness. Various functional measures were conducted to examine the outcomes of the rehabilitation at different time points.

Result

After the first phase of rehabilitation, the patient had significant improvement in his upper limb coordination, as shown in grip strength (10kg to 19 kg), dexterity of the upper limb (6kg to 10kg) and Nine Hole Peg test (85 seconds to 50 seconds). Cognitive function also improved, but the memory function remained unchanged. Significant improvement in functional performance was revealed in Activities of Daily

living (ADL) and Instrumental ADL (IADL) except in more difficult tasks: taking medication and handling calculation in shopping. Upon completing the second phase of rehabilitation with prescription of Fresnel prism, the patient walked faster in the cluttered paths (0.09 m/s) and made fewer contacts with the obstacles along the paths. Proper use of Fresnel prism during locomotion increased patient's peripheral awareness, which further facilitated his physical movement. Our case study demonstrated the benefits of a two-phase multidisciplinary rehabilitation to address the functional needs for a patient with multiple disabilities in physical, cognitive, visual, and functional perspectives.