

A case report: Transhumeral amputee treatment with osseointegrated prosthesis and rehabilitation

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Abstract

People with proximal transhumeral amputation usually choose prosthesis as an alternative to improve occupational performance, but frequently presenting difficulties in the distal control, poor elevation to reach some object, and tolerance to use in ADL and day time, added to frustration and high perception of disability. This report described the results in the first experience with one patient who suffered a work accident in Chile in a long-term following up 7 years after discharge, who take the choice for osteointegrated prosthesis training for amputation at the proximal transhumeral level and hybrid system (electrical elbow and body-power hook), the patient has previous experience with conventional body-power prosthesis and caps. For this, a standard rehabilitation protocol was applied, modifying it in relation to the Chilean experience in classical prosthetic training. The evaluation methodology consisted of daily time measurement, functional test of 400 points (adapted), range of motion, VAS, and DASH. The patient underwent these tests with conventional mechanical support prostheses with a common cap before the osseointegration surgery and then at the end of the protocol with the new osseointegrated prostheses.

The results showed an increase of 39% in the overall functionality in ADL according to the 400 pts test, according to the DASH test a decrease in perception in disability related to Work of 32 pts and increased tolerance to daily prosthetic use from 3 to 12 hrs and the function of upper extremity reach, greater support and tolerance to use, together with a better control of the prosthesis is highlighted. (C) 2020 Hanley & Belfus, an imprint of Elsevier Inc. All rights reserved.

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