E-Poster

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Functional Conventional Transradial Prosthesis versus Functional Transradial Prosthesis With Revofit® Adjustment and Suspension System: A Case Report

Topic: Prosthetics and Orthotics

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BACKGROUND

To assess the contribution of a transradial prosthesis incorporating a Revofit® system in terms of adjustability, comfort and limb function compared with a conventional prosthesis.

METHODS

A comparative study was conducted concurrently at the Orthopedic Prosthetics and Orthotics Center (CAO) in Manouba and the Physical Medicine A department of the Kassab Institute of Orthopedics, including patients followed for unilateral transradial amputation who used a conventional prosthesis and experienced difficulty donning it. Medical history, the local condition of the residual limb and joint ranges of motion were recorded. A prosthesis incorporating a Revofit® system, which allows socket adjustment, was fabricated. The previous conventional prosthesis and the Revofit® prosthesis were compared in terms of fit, comfort, stability and adaptability. Functional assessment included object manipulation and grasping, the Functional Independence Measure (FIM), and dexterity assessment. Patient satisfaction was measured using a visual analog scale (VAS).

RESULTS

One patient, aged 57 years, with no medical history, was included. He had undergone right upper limb amputation following a road traffic accident 20 years earlier. He had received a total of four transradial prostheses since the injury. Examination showed a cylindrical residual limb without defects, measuring 19 cm from the olecranon to its distal end, with a noninflamed scar. Comparative assessment against the conventional prosthesis showed better, more precise and easier fit with the Revofit® system, with greater comfort, better adaptability and more secure stability during flexion and extension, without requiring readjustment during exercise, unlike the conventional prosthesis, which showed considerable displacement. Functionally, the patient scored 360/400 on the object manipulation and grasping assessment (400-point assessment) and 124/126 on the FIM. Subjective assessment showed satisfaction of 9/10 on the VAS with the new socket, compared with 6/10 with the previous socket.

CONCLUSION

The Revofit system offers a useful solution with a personalized, comfortable fit without compromising joint mobility, allowing near-normal function.

Statement of Disclosures

None

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