

DIAGNOSIS

Severe crush injury to left hand, with complete avulsion of skin overlying thumb.

MEDICAL HISTORY

The patient, a 24 year old male, had his left hand caught in a metal cutting machine while at work. Upon admission to the hospital emergency room, the patient presented with a painful and edematous left hand. Although the patient was capable of actively moving his left thumb, all skin overlying the thenar area had been degloved. Additionally, the index, middle, ring and little fingers were ischemic due to the severity of the injury. During surgery, the patient's index finger was amputated, and revascularization of the remaining digits was performed. A soft tissue flap from the amputated index finger was used to cover the thumb. The patient responded favorably to postoperative treatment and was discharged home with an order to begin hand therapy.



CLINICAL INDICATION FOR CPM

The JACE H440 Hand Rehabilitation System was selected for the therapy regimen due to the patient's need for rehabilitation treatment to the digits and the thumb. The device was used in the hand CPM configuration to mobilize the MCP, PIP and DIP joints of the III, IV and V digits. Due to marked swelling and pain during treatment, the use of electrotherapy was initiated. The JACE Tri-Stim in combination with the JACE Electro Mesh Glove was used to deliver High Volt Pulsed Current. Gains in passive motion and a reduction in edema and pain were noted.

To address a developing contracture of the first web space, the JACE Thumb Splint was used to provide CPM and Dynamic Tension. The patient tolerated the treatment well and overall improvement in thumb flexion and extension was achieved.

FOLLOW-UP

The patient continues to use the JACE Hand Rehabilitation System configured in a CPM mode for both the digits and thumb of his left hand. Future reconstructive hand procedures are planned and the JACE H440 Hand Rehabilitation System will continue to be used postoperatively.



◀ *Six weeks following initial trauma, patient underwent debridement and skin grafting to dorsum of left hand. Note amputation of index and viable skin flap over thumb area.*



Patient in now 12 weeks post injury with complete skin coverage to entire left hand. Scar tissue over volar surface of hand limits motion of thumb. Limited passive and active motion is noted at all digits. ▶

CASE STUDY

JACE™ H440 HAND REHABILITATION SYSTEM



Jace H440 Hand Rehabilitation System in hand CPM configuration setup in MCP only mode. In addition, JACE Tri-Stim with Electro Mesh Glove in High Volt Pulsed Current mode is used to decrease edema and pain.

Patient alternates III, IV and V digit motion with JACE Thumb Splint in CPM mode, enabling controlled flexion and extension planes of motion.



For more information on JACE H440 Hand Rehabilitation System or other upper extremity rehabilitation products, please call:

800-800-4CPM
(800-800-4276)

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