

Construction of a Short Above Knee Pylon in a Patient with Amputations of Three Extremities

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L. S. is a 25-year-old male who fell in front of a moving subway train on November 17, 1968. He was admitted, unconscious, to Temple University Hospital on the day of the accident. The systolic blood pressure was 70, with a pulse rate of 130. The physical examination on admission disclosed traumatic amputations of the right leg

approximately five inches below the greater trochanter, the right upper extremity approximately four inches distal to the head of the humerus, the left leg at the ankle. The patient was transfused and taken to surgery. The following procedures were done: a left below-knee amputation four inches distal to the tibial tubercle; the fibula was removed two inches higher; a right above-knee amputation done two inches below the greater trochanter; a right above-elbow amputation done three inches distal to the head of the humerus.

Subsequent to surgery, the right lower-extremity stump oozed seropurulent material. December 9, 1968, there was a revision of the right stump. The revision was done

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Figure 1

through the greater and lesser trochanter. (Fig. 1)

Description of Pylon: The pylon was fabricated using a positive mold. The mold was then sanded into a quadrilateral-type socket. The femoral triangle was hollowed out. About this mold a final socket was fabricated in forty-five degrees of hip flexion. A two-by-two was used for the "thigh" of the pylon. Initially the thigh section consisted of a tapered block with a hinge. This was used in conjunction with a hip Spica the patient wore for about two weeks while developing ambulatory skills. Its purpose was to allow removal of the pylon at the hinge by removing the peg connecting the two halves (Figure 2). This was attached to an above-knee prosthetic unit* (Figure 3-6). The socket fit so well that with the patient at forty-five degrees of hip flexion, it was impossible to pull the socket from the stump. A

* United States Mfg. Co., 623 South Central Ave., P.O. Box 110, Glendale, California 91209.



Figure 2

shoulder strap was used as additional suspension.

A method of fabricating a satis-

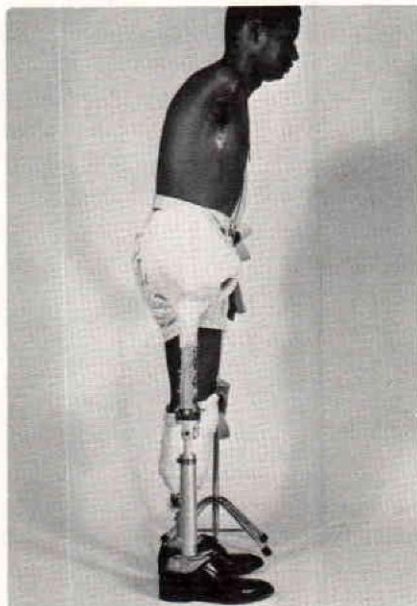


Figure 3



Figure 4



Figure 6



Figure 5

factory short above-knee pylon has been described.

The patient was discharged on May 2, 1969, capable of ambulating one thousand feet. He is completely independent in activities of daily living including the ability to go up and down stairs.

We are aware of the fact that the patient will depend on a wheelchair for most of his locomotion. However, because he could not leave his house or be independent in toilet care without the limbs, we feel that the energy expended on the patient was justified. Final prosthetic devices have now been fabricated.