

# PROSTHESIS AFTER AMPUTATION FOR SCLERODERMA

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Editor's Note: *Orthopedics, Traumatology and Prosthetics* is a journal published in Moscow and received by The American Orthotics and Prosthetics Association in exchange for the *Orthopedic and Prosthetic Appliance Journal*.

We are anxious to publish abstracts of the articles in it directly related to prosthetics and orthotic appliances. We are indebted to Elliott Markell of Markell Shoe Company for a review of the following article and to Dr. Drillis of the Prosthetic Devices Study of New York University for a translation. It is our hope to publish other abstracts in succeeding issues of the *Journal*.

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Galina K., 29 years old, entered the Prosthetics Institute in August 1957.

At the age of 3, after scarlatina and diphtheria, she developed a swelling scleroderma which chiefly affected the distal portions of the left leg and left arm.

At the age of 12, she walked with crutches, with only the right lower leg for support. She was unable to walk on the left leg because of the contraction of the hip and knee joints.

Although she was given systematic medication, physical and spa treatments, the scleroderma grew worse, and only in the last five years was it noted that the swollen parts had healed. On the left forearm and left hip, the damaged tissue was being replaced with normal skin, and trophedema on the feet had healed up.

At the time of admission to the hospital, it was observed that there was a marked shortening and atrophy of the left shin and foot and also a contraction of the left hip ( $150^\circ$ ) and left knee joint ( $90^\circ$ ). The amount of blood flow in the left thigh was determined with the aid of radio-active isotopes and was found to be two to three times less than on the right side.

It was decided to do an amputation on a level with the lower third of the thigh. As a relative contraindication was the scarred skin on the medial surface of the thigh. The amputation was performed directly above the epicondyles of the femur. Healing came at the end of the first month with a moderate sized mobile scar forming on the end of the stump.

At this point, preparation for the prosthesis was begun including physical therapy procedures, massage of the stump and gymnastic exercises to eliminate the contraction of the hip joint. During one month the patient learned to walk with the leg in a plaster of Paris prosthesis. Thereafter a wooden prosthesis without a lock in the knee joint was used.

The fabrication of the prosthesis was complicated because the stump of the left thigh was severely atrophied. It was almost without subcutaneous fatty tissue, and the skin in some places had changed to scar tissue. Besides, it was noted to have a contraction of abduction of the left thigh in a range of 20 degrees.

The prosthesis was constructed with careful attention to the peculiarities of the stump. The thigh socket was oriented outward in relationship to the knee joint. The alignment of the socket was based on the results of the contraction examination—a little bit forward and outward. The internal anterior surface of the socket, surrounding the end of the stump, was covered with foam rubber to prevent painful contact with the hard wall of the socket.

Investigation six months after discharge from the hospital showed that Galina is walking well on the prosthesis with a cane in her right hand. She does not complain of pain.

This case merits study because it is of a kind seldom seen—also because of the unusual character of the prosthetic procedure.

## **WESTERN ORTHOPEDIC ASSOCIATION MEETING**

The Western Orthopedic Association, one of the largest groups of its kind in the World, met at Coronado, California, near San Diego, October 23 to 27. We are indebted to John A. Metzger, the AOPA member from Long Beach, California, for an interesting report on this session and a copy of an attractive program. Mr. Metzger recommends that at future meetings of the Western Society, there should be an exhibit on the value of dealing with certified facilities. Such a display, he believes, would do a great deal to promote Certification, both of individuals and of the facilities.

The program of the meeting included a discussion of a new technique and a new prosthesis for knee disarticulation by Robert Mazet, Jr., and Charles A. Hennessey, an AOPA member from Los Angeles. The Biomechanics Laboratory Group from Berkeley, California, presented a seminar on Problems in Amputee Research, similar to the session at the AOPA Assembly in New York City.

The Space Age was presented by a seminar on Orthopedic Aspects of Space Flight by a group of specialists from the Aerospace and Radiation Medicine Group of Convair-San Diego, which is a division of General Dynamics.

Among the technical exhibitors were Hittenberger's of San Francisco, with Herman C. Hittenberger in attendance and S. H. Camp and Company of Jackson, Michigan, represented by Vice President C. B. Clemons and Miss Hazel Irving.

Dr. Marvin P. Knight of Dallas, Texas, is President of the Association for the year 1961.