

Prosthetic Research in Czechoslovakia

By EARL F. HOERNER, M.D.

*Director of Rehabilitation Service
New Jersey Orthopaedic Hospital
Orange, New Jersey*

(The following is based on notes by Dr. Hoerner after a visit to Czechoslovakia in the summer of 1963).

The Czechoslovakia Institute of Prosthetic Research, located in Prague, is doing basic clinical research in the problems of orthotics and prosthetics. It is located adjacent to a children's hospital where specific problems of scoliosis, congenital amputations, cerebral palsy, and associated motor disturbances are studied from the viewpoint of orthopaedics, physical medicine and neurology, with particular interest in kinesiology.

The research which the Institute performs follows very closely that accomplished in the United States in the past ten years. It was the opinion of this observer, as well as others who visited there, that the studies the Institute was then performing were, from the standpoint of advancement and present status, items or areas completed by us at least five years in the past. However, much emphasis was being placed on gait studies, using the technique developed by Dr. Herbert Eftmann, Professor of Anatomy at Columbia University, and analyzing the various stances and propulsion phases from the standpoint of ambulation, stair climbing, and even running.

These studies on propulsion and weight-bearing stress lines were very similar to those seen in this country in our prosthetic research laboratories at the Veterans Administration, University of California at Los Angeles, New York University, and Northwestern University.

Dr. V. Janda, Director of Rehabilitation Services for the country of Czechoslovakia, and associated with the Medical School at Charles University in Prague, was also doing some special work in conjunction with the Institute and its Director, Dr. J. Chodera, on the muscles used in various patterns in posture and ambulation. A well-equipped electromyographic laboratory was seen which used screens to study muscles and their action in phasic agonist and antagonist function. Attempts are made by the Institute of Prosthetic Research to duplicate these motions in the prosthetic training and engineering they have studied and are continuing to evaluate.

Dr. Chodera requested the opportunity to receive up-to-date American literature, as they had not been able to get any information of this type, from a professional standpoint, since 1954. (Editor's Note: It should be noted that a 1962 edition of *Spoja*, a publication prepared by Dr. Chodera and others, lists articles from the *Orthopedic and Prosthetic Appliance Journal* for 1961, and from the *Journal of Bone and Joint Surgery* for 1960 to 1962).

In a discussion with Dr. Chodera, it was found that the pneumatic and similar prosthetics which have been developed in European countries have not been made available, as of 1963, to the countries behind the "Iron Curtain." In a discussion concerning the electronic-driven mechanisms which I viewed while in Moscow at the Russian Institute of Science, it was learned that these procedures and techniques have not been made available to other countries outside Russia.

Another interest at the Institute was in the replacement of traumatic amputated extremities by limbs from other persons. In Prague a limb storage unit has been set up for the purpose of maintaining legs, feet, arms and hands in available condition so that they can be surgically grafted to persons who have lost their extremities. Several patients were seen with these medical-surgical procedures accomplished. In Czechoslovakia, apparently, greater advances have been made in overcoming the problems of tissue sensitivity and heterogeneous donors than in our country.

However, although most of the work done by the staff in this research unit is similar, as stated previously, to that performed in our research units in prosthetics and orthotics here in the United States, they appear to be at least five years behind us—especially from the viewpoint of clinical application and development, and particularly in the use of plastics and other substitutes.

Dr. Engle to Head VA Center in Los Angeles

The Veterans Administration has announced that Dr. H. Martin Engle, who has served as Deputy Chief Medical Director since May, 1960, will become director of the VA Center in Los Angeles, the largest medical complex in the VA system.

Dr. Engle, who is a graduate of the University of Illinois College of Medicine, 1939, had previously been director of VA hospitals in Salt Lake City, Utah, and Denver, Colo., before coming to Washington. He was assistant clinical professor of medicine at the University of Utah College of Medicine from 1953 to 1955 and held the same post at the University of Colorado Medical School from 1955 to 1960.

He served as a major with the Medical Corps, Army of the United States, from 1942 to 1946. Following the war, he became associated with the VA and served in the states of Montana, Oregon, and Washington before becoming director at Salt Lake City.

Dr. Engle is certified by the American Board of Internal Medicine. He has been a Fellow of the American College of Hospital Administrators since 1962; a member of the House of Delegates of the American Medical Association, 1960-1964; and a member of the Council on Professional Practice of the American Hospital Association since 1963.

Born in Rockdale, Texas, in 1912, Dr. Engle holds a B.S. degree from Baylor University, an M.D. degree from the Baylor College of Medicine in Dallas, and a Ph.D. degree in biochemistry and physiology from the University of Minnesota. He served in the Army Medical Corps from 1942 to 1946 and holds the Legion of Merit.

MILWAUKEE BRACE WORKSHOP SLATED

A Workshop for the treatment of scoliosis and round back with the Milwaukee brace will be conducted under the direction of Walter P. Blount, M.D. and Richard G. Bidwell, C.O. at the Marquette University School of Medicine and the Milwaukee Children's Hospital from August

24 through 27, 1964. Teams including orthopaedists and orthotists should write for information to Dr. J. W. Rastetter, Director of Post-Graduate Medical Education Programs, Marquette University School of Medicine, 8700 W. Wisconsin Avenue, Milwaukee, Wisconsin 53213.