Orthopedic-Prosthetic Idea Exchange

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This department has recently received several communications, one of which we believe has special merit, and is presented in this issue. Dr. Edward T. Haslam has devised an assistive device for training in the initial application of the suction socket, which should help to instill confidence in the new amputee, who might otherwise be discouraged from regular use of the prosthesis. We appreciate Dr. Haslam's communication and hope that there will be further constructive ideas forwarded to us so we may pass them on to our readers.

The Prosthetics and Sensory Aids Service of the Veterans Administration is now undertaking a clinical application study of the newly developed Hydra-Cadence artificial leg, which is an above-knee prosthesis incorporating a hydraulic knee mechanism, working in unison with the wood foot to which it is mechanically connected. The SACH foot cannot be used with this device because of the dynamic mechanical connections. The aims of the study are to gather data regarding advantages or disadvantages of the limb, to determine maintenance problems, and to ascertain any difficulties in training an amputee with such a prosthesis. The Washington Orthopedic and Prosthetic Appliance Clinic has been selected as one of the field stations for testing of this device, and we will be happy to forward our comments to you as the prostheses are prescribed and placed under field study. We anticipate many interesting observations as to whether the Hydra-cadence unit actually does give synchronized knee action and toe pick-up, cadence control enabling the amputee to take either short or long strides, and secure and proper ankle movements.

This clinic has been somewhat discouraged in its observations on biceps cineplasties, as we have yet to find a single cineplastic amputee who continued with the use of his cineplastic prosthesis for more than a few weeks or months after discharge from the military service. We have had six amputees with biceps cineplasties, and all have converted to a conventional below-elbow prosthesis. In three instances, the difficulty was due to torsion of the tunnel pin, and in the others the constant irritation and discomfort in the tunnel site with regular use of the prosthesis hindered its regular use. We have made several attempts to continue use of the cineplastic device, but in each instance the amputee has returned and demanded replacement with a conventional appliance. Two have asked for revision of the stump with excision of the skin tunnel in order to eliminate the bothersome daily hygienic cleansing which becomes more difficult as the tunnel becomes increasingly narrow. We would like to have your comments on this particular problem, to determine whether the cineplasty operation should continue to be advocated. Please pass your observations on to us so that we may publish them for the benefit of our readers.

With long Above-Knee stumps, the placement of the knee center sometimes presents a vexing problem. The prosthetist members of our clinic team have been successfully using an inverted knee stop to conserve space in such long above-knee amputation stumps in order to retain the knee center as high as possible. Do you have any novel ideas about this particular prosthetic fitting problem? Do you like the lever type of knee stop?

The value of a social worker in the orthopedic clinic team has been repeatedly proven, especially in securing follow-up physical therapy, gait training, and the carry-over into vocational rehabilitation. In our clinic she has been particularly valuable in the follow-up on upper extremity amputees, who are notoriously infrequent users of their prostheses, especially those above the elbow. We have been conducting a survey of these amputees in an attempt to resolve any problems hindering regular use of the prosthesis. However, there has been considerable difficulty in securing the return of the above-elbow wearers, those presenting the principal problem, and it appears that our many modern advancements in this field will have only limited success because of the associated psychological and follow-up problems.

The clinic has recently become interested in the use of plastic corsets for both upper extremity and lower extremity prostheses. We would like an expression from those who have used such appliances as to durability, ease of manufacture, and satisfaction of the wearer. Plastics are becoming more generally used throughout the industry, and dissemination of information would be a valuable contribution to all concerned. Our prosthetists are particularly interested in the question of proportion of rigid versus flexible elements in the manufacture of plastic corsets.

The relationship of pain in the unamputated side to the amputation stump must always be borne in mind. We recently had a young amputee with a persistent strain of the knee which was found to result from a malfunctioning below-knee prosthesis on the opposite side. Replacement of the prosthesis relieved his knee strain, which had been under investigation by other physicians for several months.

We are continuing the use of 2% Prantal dusting powder, and to date have been very much encouraged by its control of perspiration problems, especially with suction sockets. The product is under limited distribution at present by Schering Corporation, Bloomfield, New Jersey, but limited quantities are available for use under controlled conditions of field investigation.

Our orthotist, A. E. Corfman, Jr., of R. & G. Orthopedic Appliances, has come up with a rather novel idea of using a lead weight in the heel of the shoe to help control a moderate footdrop deformity, as a substitute for a short-leg brace. This is in limited use at present, but the idea might be used by others; we would appreciate hearing comments on its use. The average weight used is approximately 14 ounces.

Again, we ask for your comments in all of these fields, as it is our function to distribute them. This will be of considerable aid to the innovator of the idea, as he can thereby gain a fuller evaluation and perhaps modify his idea for more successful use.

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