

Questionnaire

Since the scope of the *Newsletter, Prosthetics and Orthotics Clinic* has been expanded, we would appreciate your reaction to a possible change of title:

1. Keep as is
2. Digest of Prosthetics and Orthotics Clinics
3. Orthotics and Prosthetics Clinics
4. Orthotics and Prosthetics Digest
5. Other: _____

An Ankle-Foot Orthosis Providing Mediolateral Stabilization While Allowing Free Plantar and Dorsiflexion of the Foot

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The development of an ankle-foot orthosis (AFO) providing mediolateral stabilization while allowing free plantar and dorsiflexion of the foot was prompted by a patient (W. F.) seen some months ago, who was wearing a posterior solid ankle-foot orthosis (PSAFO). However, rather than providing ankle stability, it was ineffective and an irritant during stance. W. F. was unhappy with it, and discouraged.

In evaluating his condition, he was found to have good plantar and dorsiflexion, but suffered from mediolateral ankle instability. He was shown a conventional AFO with a metal stirrup and metal uprights, demonstrating the mediolateral protection the orthosis provides, while allowing free motion at the ankle. The fact that it was less cosmetic than a plastic orthosis did not concern the patient, if it allowed him to walk normally again and not with a stiff ankle. But considering his physician's preference for plastic over a metal orthosis, with its advantages, e.g., free choice of shoes, better appearance, etc., it occurred to us to combine mediolateral protection of the ankle with free ankle flexion-extension in a plastic orthosis.

This idea was realized by incorporating an ankle joint similar to that used in fracture bracing in a PSAFO (Figure 1). From a plaster mold of the patient's limb, a PSAFO was fabricated with an anterior section for added tibial support. The distal aspect of the calf section was trimmed to clear the Achilles tendon. The proximal edge of the footplate was trimmed so as to include the malleoli (Figure 2). A contoured bar was



Figure 1

riveted to the lateral aspect of the posterior calf portion and joined with the footplate over the malleoli, creating a pivot point allowing rotation necessary for flexion or extension (Figure 3). Two velcro straps pro-



Figure 2



Figure 3

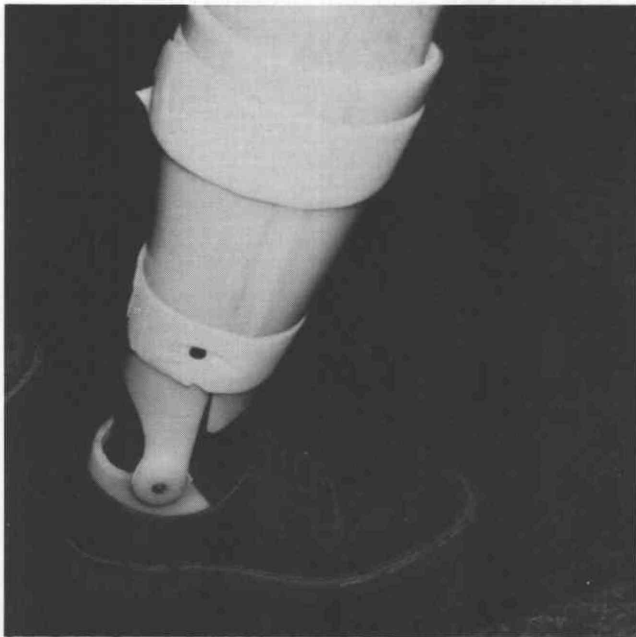


Figure 4a

vided an intimate fit around the limb. The patient was pleased with the function and support provided by this orthosis.

The second patient fitted with this type of orthosis (R. R.) had a similar ankle problem. A slight change in the design was made. A separate ankle joint as with W. F.'s orthosis was not used. Rather, the proximal edges of the footplate were extended to the proximal aspect of the malleoli. The distal edges of the posterior calf section were then made to overlap the malleoli portions of the foot plate (Figures 4a and 4b). This joint system works smoothly and is more cosmetic, although it requires a little more work. R. R. was delighted with the orthosis since he can wear it with regular Oxfords or boots (Figures 5 and 6).

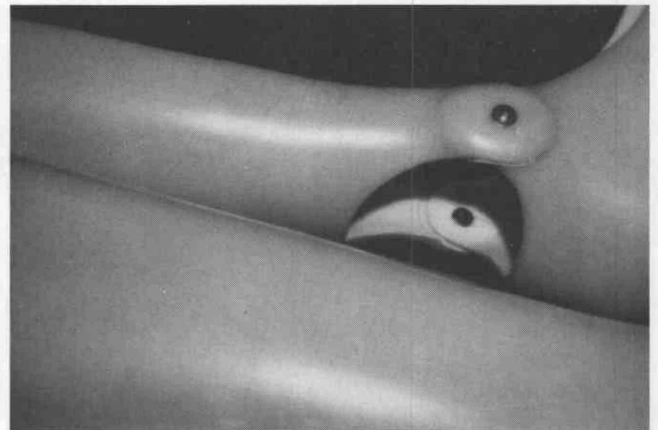


Figure 4b

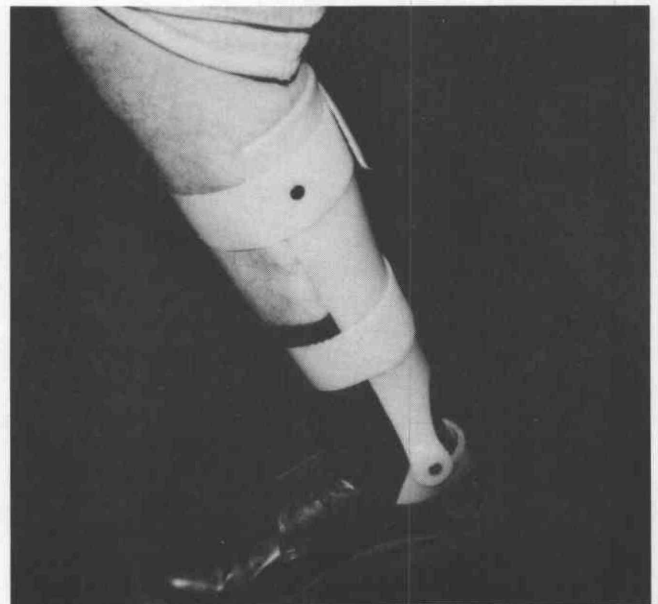


Figure 5

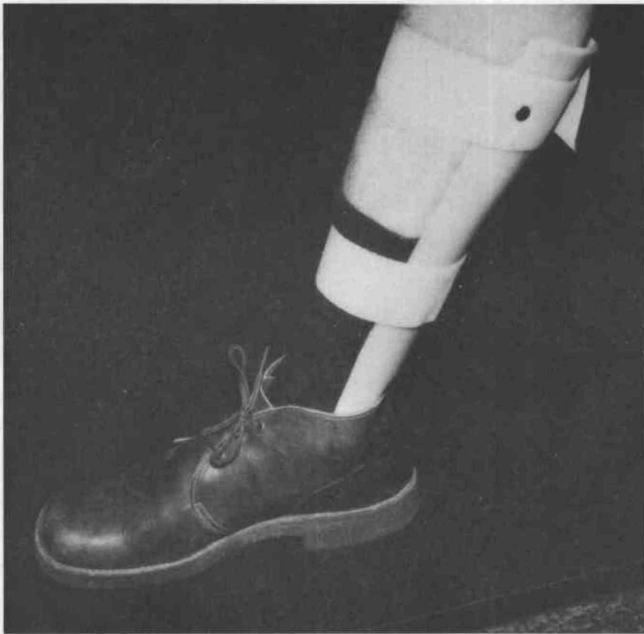


Figure 6

A third patient (P. B.) with a similar problem of ankle instability was fitted with the same type of orthosis made for R. R., but eliminating the anterior portion. This patient, too, was happy with the freedom of motion it allowed (Figure 7).

In these three cases, free plantar and dorsiflexion were allowed while mediolateral ankle stability was



Figure 7

achieved. Though it involves extra work and time during fabrication of this type of ankle joint on a posterior solid ankle foot orthosis, the security of the ankle on weight bearing, the freedom of movement while walking, and the satisfaction of the patients wearing the orthosis are achievements justifying the extra effort and expense.

An Editorial

The Driving Force in Rehabilitation

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By design, and in daily clinical practice, rehabilitation is a multi-disciplinary effort. The patient is best served by professionals addressing the psychosocial and vocational aspects of disability as well as the various aspects of physical impairment in a specialized manner. The driving force behind the effective functioning of this approach is communication among the professionals comprising the rehabilitation team. This communication may occur within the structured format

of professional publications, the formal yet often spontaneous settings of team clinics and rounds, or the many informal daily contacts between colleagues involved in the treatment of any one patient.

Such communication enhances patient management in numerous ways. Consistent definitions and coordination of treatment approaches and goals can be achieved. Different perspectives regarding the same clinical situation can be shared, perspectives tempered by

the different relationship each team member has with the patient, the expertise each member brings to the clinical problem, and the priority of concerns each establishes according to his or her functional role. Perhaps most importantly, the team is able to bring its collective clinical experience to bear upon the problem at hand. No one clinician, regardless of depth or breadth of experience, should fail to search out and use this collective experience for it can only serve to