the progression of AAF. An equinus contracture, most often associated with tight triceps surae muscles, applies excessive force on the weight-bearing foot. Over time, this breaks down the midtarsal joint and the medial longitudinal arch, gradually increasing strain on the PT tendon. Physical therapy can be very helpful to stretch the gastrocsoleal complex and strengthen the PT muscle. In more severe cases, a careful tendo-Achilles lengthening (TAL) surgery may reduce some of these destructive forces.

Treatment
At the outset, patients will usually have pain, tenderness, and swelling along the PT tendon. Ice therapy for 20 minutes three times per day should help to reduce inflammation. Physicians may also prescribe nonsteroidal anti-inflammatory medications.

In mild cases, custom foot orthotics should be considered. Orthotics with a high medial flange will help support the entire midfoot. The orthotics can be made from thermoplastics, although not all patients will be able to tolerate the rigid control. Accommodative orthotics can be made from Thermocork or EVA, again incorporating a high medial flange to prevent midfoot collapse. Posting extrinsically provides medial varus support. Incorporating a slight heel raise often helps as it will decrease tension in the Achilles tendon if equinus is present. Requesting a Kirby heel skive in the cast will also shift ground reaction forces to the medial planar foot.

The midfoot collapse associated with AAF and subsequent medial deviation of the STJ axis requires that the patient wear shoes with firm shanks and stiff counters. Hiking boots are ideal: The strong counters, an upper that extends well above the malleoli, lace closures, and firm soles provide better control for the entire foot. In addition, boots with removable inlays have the space necessary for custom orthotics. There are shoe modifications, such as a Thomas heel (an extension of the medial heel), a medial flare, or an external medial buttress that may help stabilize the foot.

More advanced cases or more active patients will need additional support. One of the first principles in orthotics is to control painful or pathologic motion while allowing beneficial motion. Short articulating AFOs such as the Richie Brace® have the advantage of applying some correction across the talocrural joint while still allowing transverse-plane rotation of the lower leg. Patients who are heavier or those at a more advanced stage of dysfunction may need a sturdier plastic-in-leather or Arizona®-type ankle gauntlet. Traditional thermoplastic AFOs that exert force above and below the ankle can limit motion in all three planes. In later stages, as forefoot abduction becomes prominent, it may help to extend the lateral wall of the AFO and hold the foot straight.

The literature indicates that especially in the early stages, PTTD can be managed quite successfully using combinations of foot orthotics, proper footwear, AFOs, and physical therapy. Depending on the severity of the case, results may be seen in as little as six weeks or may take up to a year. Surgical treatment can be reserved for those patients who fail an adequate trial of conservative measures.

References