Greetings Everyone!

It is my pleasure to again serve as President of the Foot and Ankle Special Interest Group. I must admit it has been fun to sit back the last few years and just enjoy attending the FASIG programs without having to be concerned about the organization of the various meetings and educational programming. Steve Baitch did an outstanding job during his tenure as FASIG President, and his hard work is greatly appreciated by all the members of the FASIG. Steve’s leadership over the past 2 years as FASIG President has helped the SIG continue its strong tradition of providing outstanding CSM programming as well as communication with other foot and ankle health care providers.

His efforts in attempting to establish a more formal relationship with the American Orthopaedic Foot and Ankle Society, is especially noteworthy. I will continue with Steve’s efforts to establish a strong communication link with the American Orthopaedic Foot & Ankle Society as well as with the America Podiatric Medical Association and the Pediatric Footwear Association. I believe it is critical to continue to establish and maintain links with these professional groups to reinforce the role of the physical therapist in the provision of foot and ankle care.

The FASIG education program at the Combined Sections Meeting (CSM) in Seattle was again a great success with most of the sessions completely filled. The success of the CSM programming was because of the tremendous effort by Mark Cornwall, FASIG Vice-President. Mark is already in the planning stages for the education program for the CSM 2000 meeting in New Orleans. In addition, the FASIG will be sponsoring a 2-day “preconference course” at the New Orleans CSM Meeting. This “preconference course” will be quite similar to the 2 1/2-day Foot & Ankle Seminar, which was sponsored by the FASIG, Orthopaedic Section and the Rehabilitation Division of the National Institutes of Health, held at Bethesda, MD in November 1998. That course was extremely well received with over 80 attendees. The tentative CSM education program as well as the tentative schedule for the “preconference course” is outlined below.

In addition, the FASIG, in conjunction with the Orthopaedic Section, is tentatively sponsoring a second 2 1/2-day Foot & Ankle Seminar (identical to the NIH course) in the Chicago, IL area, during June or July 2000. More information will be provided as final details are completed.

Mark is also working with Irene McClay and Debbie Nawoczenski to develop a FASIG-sponsored “research retreat” to help facilitate the development of a physical therapy body of knowledge in the foot and ankle, both from clinical and basic science standpoints. The meeting was originally planned for May 1999, but because of various scheduling conflicts, it has been postponed until the summer of 2000. Irene, who is an associate professor in the physical therapy program at the University of Delaware, has volunteered to host the research retreat possibly in May or June 2000. The tentative theme for this 2-day retreat is the “static and dynamic classification of foot structure" from both an evaluation and management perspective. The retreat should provide an excellent opportunity to establish our current level of understanding regarding foot structure classification as well as develop directions for future clinical and basic research.

Finally, I would like to see the FASIG develop a survey that would be distributed to the Orthopaedic Section membership that would be used to establish a database of physical therapists who are currently providing various levels of foot and ankle care. In addition to gaining insight into the number of therapists actively involved in providing foot and ankle care, the information obtained from the survey would be used to develop a referral database of physical therapists who can provide various levels of foot and ankle care. It is my hope to have a draft copy of the survey to present to the FASIG membership for approval at the business meeting at the New Orleans CSM, so that the survey could be distributed during the spring of 2000.

In this issue of Orthopaedic Practice, I have included a short foot and ankle case study for you to review and comment on. I would like to present at least 3 case studies a year as a way to stimulate discussion and debate regarding foot and ankle evaluation and management.
The format of this foot and ankle case study is very relaxed – the intent should be to share interesting patients with our colleagues. I hope that you might consider submitting a case study to be included in our FASIG section in the next issue of Orthopaedic Practice. If you have any questions or comments regarding the submission of a case study, please do not hesitate to contact Mark Cornwall or me.

In closing, I appreciate the opportunity to again serve as President of the FASIG. I look forward to working with each of you over the next 2 years. I encourage all of you with an interest in the Foot and Ankle to get involved in the FASIG. The success of the FASIG is directly related to the involvement of the membership, so I encourage each of you to be an active supporter of the FASIG by attending not only the education sessions but also the business meeting as well. If you have any suggestions or comments regarding the FASIG, please do not hesitate to contact me!

Best Regards,

Tom McPoi

FOOT & ANKLE DYSFUNCTION: Evaluation and Management of Diabetic, Arthritic, and Orthopaedic Disorders

This 2-day workshop is designed to provide the physical therapist with the required clinical and scientific knowledge base to effectively evaluate and treat a variety of conditions affecting the foot and ankle. The workshop will include a discussion of various foot and ankle management topics including: functional anatomy of the foot and ankle, neurological factors affecting the foot and ankle, the application of functional anatomy during dynamic movement of the foot and ankle, the utilization of foot orthoses in management programs, and evaluation and management protocols used in the treatment of foot and ankle problems associated with orthopaedic and sports injuries as well as with diabetes or rheumatoid arthritis.

The presenters for this course include: Susan Appling, MS, PT, OCS; Joseph Shrader, PT, CPed; Michael Mueller, PhD, PT; Gary Hunt, MS, PT, OCS; Jim Birke, PhD, PT; and Thomas McPoi, PhD, PT, ATC

DAY 1
SESSION 1 - Basic Science of Foot Movement

8:00 am - 8:15 am Introduction
8:15 am - 9:15 am Functional Anatomy of the Foot & Ankle
9:15 am - 9:30 am BREAK
9:30 am - 10:45 am Neurological Factors Affecting Foot & Ankle Function
10:45 am - 12:00 pm The Tissue Stress Model: A Basis for the Physical Examination of the Foot and Ankle
12:00 pm - 1:00 pm LUNCH

SESSION 2 - Management of the Diabetic Foot
1:00 pm - 2:00 pm Pathomechanics Affecting the Diabetic Neuropathic Foot
2:00 pm - 2:15 pm BREAK
2:15 pm - 3:15 pm Evaluation of the Diabetic Foot
3:15 pm - 4:15 pm Management Considerations for the Diabetic Foot
4:15 pm - 5:30 pm Case Study - Neuropathic Diabetic Patient

DAY 2
SESSION 3 - Management of Orthopaedic & Sports Related Problems of the Foot & Ankle
8:00 am - 9:00 am Factors Contributing to Orthopaedic & Sports Foot and Ankle Problems
9:00 am - 9:15 am BREAK
9:15 am - 10:15 am Evaluation of Orthopaedic & Sports Related Foot & Ankle Problems
10:15 am - 11:15 am Management of Common Orthopaedic & Sports Related Injuries Affecting the Foot & Ankle
1:15 am - 12:30 pm Foot Orthoses: Design and Effectiveness
12:30 pm - 1:30 pm LUNCH

SESSION 4 - Management of the Rheumatoid Foot
1:30 pm - 2:30 pm Pathomechanics Affecting the Rheumatoid Foot
2:30 pm - 3:15 pm Evaluation of the Rheumatoid Foot
3:15 pm - 3:30 pm BREAK
3:30 pm - 5:00 pm Management Considerations for the Rheumatoid Foot
5:00 pm - 5:15 pm Course Summary & Evaluations

FRIDAY AFTERNOON – General CSM FASIG Programming
12:30 pm - 1:30 pm Case Study – Neurological Patient
1:30 pm - 2:30 pm Case Study – Rheumatoid Arthritic Patient
2:30 pm - 3:30 pm EXHIBIT BREAK
3:30 pm - 5:30 pm The Use of Foot Orthoses: Case Studies illustrating the use Footwear & Foot Orthoses in the conservative management of foot & ankle disorders
FOOT & ANKLE CASE STUDY
Thomas McPoil, PhD, PT, ATC

The following case study illustrates the importance of assessing not only the profile of the medial longitudinal arch and hindfoot position, but also the amount of mobility present in both the midfoot and hindfoot. Individuals with "flat feet" are commonly grouped together as patients with excessive pronation. Unfortunately, these individuals may have "flat feet" but also have limited joint mobility, which necessitates a change in the approach used to successfully manage the patient.

PATIENT HISTORY:
C.M. is a 19-year-old male complaining of pain in the right foot over the medial aspect of the tibia, extending from just inferior to the medial malleolus to approximately 6 cm above the medial malleolus. He has had the pain for the past 3 weeks. He had been diagnosed with posterior tibial tendonitis by his team's athletic trainer. C.M. is a member of his university I-AA intercollegiate football team and plays the position of linebacker. His height is 75 inches and his weight is 210 pounds. He notes that he has had flat feet all of his life, with his right foot worse than the left, and remembers wearing braces and special shoes as a child. He states that he had "arch pain" as well as shin splints throughout his high school football career and used foot orthoses to alleviate his symptoms. While the foot orthoses helped decrease his symptoms, the rigid plastic orthoses made his feet tired, tended to roll his feet to the lateral side of his shoes (he felt because of the rearfoot varus post), and usually would crack on a yearly basis near the rearfoot post. Currently, he was not using any type of foot orthoses and was having the athletic trainers tape his foot daily for practices as well as games. While his symptoms have improved since he began having his arches taped, the skin on the bottom of his feet has become irritated. In addition to his primary complaint, he also states that his feet always feel very tired and that he has difficulty doing squats during his weight lifting sessions. He would like to have a pair of foot orthoses that would support his feet similar to the taping but at the same time would provide some cushioning.

STANDING WEIGHT-BEARING VIEW

SIGNIFICANT FINDINGS FROM PHYSICAL EXAMINATION:
- General Foot Posture in Standing
  - Both feet exhibited an extremely flat medial longitudinal arch with the right foot slightly lower than the left foot
  - Both calcanei only slightly everted

- Active and Passive ROM
  - Within normal limits for talocrural (ankle) joint nonweight bearing
  - End-range dorsiflexion limited when standing, full-weight bearing
  - First MTP extension – 65° nonweight bearing; 35° weight bearing
  - Passive mobility of hindfoot – limited with inversion greater than eversion bilaterally
  - Passive mobility of the midfoot
  - Oblique movement – markedly limited bilaterally
  - Longitudinal movement – minimal amount of motion bilaterally

- Sit to Stand
  - No change in foot or medial longitudinal arch posture was observed during sit to stand bilaterally
  - Profile of medial longitudinal arch low while weight bearing, bilaterally

- Attempts to have patient elevate or "create" a medial longitudinal arch while weight bearing unsuccessful. When patient attempted to elevate the MLA, the entire plantar surface of the foot would lift off the ground as a unit – no evidence of independent midfoot movement
- Great Toe Extension Test
  - Positive for reduced windlass mechanism response
- Navicular Height Measurement
  - Not done because of patient's inability to elevate the MLA
- Dynamic Plantar Pressure Assessment
  - Right foot demonstrated greater plantar surface area than the left foot
Differential diagnoses for Posterior Tibial Tendonitis

- **Medial Tibial Stress Syndrome**
  - No pain noted with palpation of the medial border of the tibial shaft
- **Soleus Syndrome**
  - Negative based on symptoms
- **Tibial stress reaction/fracture**
  - Negative based on symptoms
- **Compartment syndrome**
  - Negative based on symptoms

**ASSESSMENT:**
Patient's diagnosis was posterior tibial tendonitis secondary to a rigid pes planus foot type.

**MANAGEMENT PROGRAM:**
- Patient continued to use ice to control inflammation as well as NSAIDs.
- Foot Orthoses fabricated to provide total contact, cushioning, as well as motion control
- LiteOption base shell was modified with a heat gun to decrease the apex under the medial longitudinal arch until the patient could ambulate comfortably. Once modifications to base shell were completed, a 5 mm UCOLite top cover (full length) was then adhered to the modified base shell. With the athlete standing on the completed orthoses, a full-length medial wedge with a maximum height of 3 mm was taped in position under the base shell. Based on patient feedback regarding comfort and foot control, a 3-mm wedge was placed on the right orthoses and 2-mm wedge was placed on the left orthoses. The wedges extended from just proximal to the first metatarsal head to the posterior (heel) aspect of the orthoses.
- To improve efficiency during squatting activities, the patient was instructed to place ½ inch lifts, fabricated from plywood, under the medial aspect of each foot.
- The patient was instructed to continue extrinsic muscle exercises that had been initiated by the athletic trainer, in addition to his other weight training activities.

**FOLLOW-UP:**
- At 2 weeks, the patient reported 85% relief of his symptoms and an improved level of performance in his squatting activities.
- At 4 weeks, the patient reported 95% relief of symptoms as well as a noticeable relief of leg fatigue. He also liked the cushioning provided by the orthoses, especially when playing on artificial turf.
- At 2 months (end of football season), he continued to report a 95% to 100% relief of symptoms.