CONGRUENT THOUGHTS

Mitchell D. Shikoff, DPM, Editor Director – ABPM

Another year has passed. For many of you, this will be the end of your journey through years of formal education and the start of a new passage into your chosen occupation. We at the ABPM congratulate you on this most special time in your life. The ABPM recognizes the challenges that await you in the near future. Board certification is an essential element in practicing podiatric medicine. Please read the article in this newsletter which highlights how we, at the ABPM, have helped to eliminate a large obstacle to board certification as a result of your extensive residency training. The rest of you now move up the ladder of preparation to podiatric practice. This includes refining your didactic and clinical skills, as well as helping your subordinate residents improve theirs. This is how we all learn and contribute to the great profession of podiatric medicine.

In our last issue, we had articles highlighting the name change of our board, the genesis of developing CAQ’s for specialties, such as wound care, our maintenance of certification program, our conversion to computer based testing, and a special resident contributed article on the role of nutrition in wound healing. If you missed it, please visit our website at ABPMed.org to check it out.

This issue is larger and packed with practical information. We are continuing to evolve. As promised in the last issue, we have a peer article for you. Please read a terrific contribution entitled “Biomechanical Considerations in Surgical Planning.” The article was co-written by Jordan Meyers, PGY-2, and Mark Linzer, PGY-1, of the Jewish Hospital and St Mary’s HealthCare in Louisville, KY. Jordan hails from Raleigh, NC. He has a B.S. in athletic training and a B.A. in chemistry from East Carolina University. His D.P.M. is from the T.U.S.P.M. His hobbies include

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playing ice hockey, snowboarding, and spending time with his wife. Best yet, he has a baby girl on the way! Mark also hails from Raleigh, NC, East Carolina University, and T.U.S.P.M. His hobbies include hockey, guitar, and cycling. Their residency program is directed by Dr. Timothy Ford. Dr. Ford is the current Chair of the C.P.M.E., a diplomate of the ABPM, and a private practitioner in Louisville, KY.

Does surgical and clinical case logging on PRR get you down? You may be thinking, why do I have to do this? We have the answer. Read the article “Why Case Logging is Important,” written by Dr. Gina Painter. Dr. Painter is a fellow Director of the ABPM and serves on the examination committee. She provides some great insights which will make the task more palatable.

Our executive director, Dr. Marc Benard, highlights our new expedited procedure to garnering ABPM certification due to your extensive 36 months of residency training. This is an opportunity you don’t want to miss! You’ve earned it.

We’re also excited to have an ABPM diplomate contributed article entitled, “Essentials and Tips for Accurate Orthopedic Foot and Ankle Diagnosis.” Dr. James Cancilleri provides some key insights to help us avoid common pitfalls due to tunnel vision and complacency.

Dr. Cancilleri is on the staff of a prominent orthopedic practice, which encompasses twenty locations in Pennsylvania and New Jersey. The Rothman Institute has experts in orthopedic sub-specialties, including spine, hip and knee, foot and ankle, shoulder and elbow, hand and wrist, sports medicine, physical medicine and rehabilitation and orthopedic oncology. The Rothman Institute is internationally recognized for excellence in clinical treatment methods, research, education and technology. Dr. Cancilleri’s areas of expertise include non-surgical treatment of foot and ankle conditions, sports injuries, wound care and customized foot orthotics. I’ve known Jim from way back during his training days in the Philadelphia area, and I’m happy to have his valuable input, which can help every resident.

Finally, I’m thrilled to tell you about our upcoming new website and look. The ABPM Board of Directors has made a substantial commitment and investment to upgrade our image and presentation to the medical and public communities. I’ve been keenly involved with the new concepts as a co-chair, along with Dr. David George, of the ABPM Marketing committee. We’ve hired a nationally renowned public relations firm to assist us in upgrading our logo and look. It’s progressive and will help us forge a professional image well into the future for our diplomates. The website will be easy to navigate and provide a wealth of information for all podiatrists, the medical community, and the general public. We have a special tab specific for you, the residents. The new designs are being incorporated into our diplomate and resident newsletters. Check us out in the near future at ABPMed.org.

I hope you enjoy this edition. Please e-mail me with any comments or suggestions. Please contact me for any questions you may have regarding the American Board of Podiatric Medicine. Your questions will be promptly answered by me or a member of our Board of Directors. We want to hear from you. If you would like your program highlighted in this newsletter to be seen by every resident, residency program director, and every ABPM board certified podiatrist in the country, contact me at footdoc@psualum.com.

Congruent Thoughts Cont’d...
We have great news for you!

Beginning with the 2013 Board Certification examination, residents who have completed the following residency types will no longer be required to submit case documentation as a precursor to the certification examination: PMSR, PM&S-36, or PM&S-24 plus PPMR.

Graduating residents and former residents who completed the above program types and pass the 2013 ABPM qualification examination in June, may sit for the 2013 certification examination in October 2013.

Older residency training sequences (e.g. PSR/PPMR/POR combinations) meeting the 36 month training requirement are also subject to the waiver. Training must include PPMR or POR residency types.
SURGICAL PRINCIPLES OF BIOMECHANICS

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One could argue that a substantial portion of elective surgery is related to biomechanics, as all of the decisions that are made in relation to surgical planning are directly proportional to biomechanics and gait. Poor biomechanics will lead to quicker degeneration and ultimate bone and tissue breakdown, at which time surgery can be done to correct aforementioned faulty mechanics to alleviate pain with ambulation. Two such examples that will be discussed in this article include adult acquired flatfoot deformity and ankle osteoarthritis. These procedures have improved significantly since their inception, directly related to medical advancements and technological advancements, which have ultimately led to a better understanding of biomechanics.

Adult acquired flatfoot deformity (AAFD) is one of the most common conditions of the hind foot, which has in part led it to be subject to extensive discussion as well as some controversy in foot and ankle surgery. Posterior tibial tendon dysfunction (PTTD) has been identified as the most common cause of AAFD, related to microtrauma and decreased vascularity of the tendon. With many listed etiologies of PTTD, clinical symptoms are related to lengthening through attenuation, partial, or frank rupture, translating into weakness and failure of plantarflexion and inversion of the foot. For stage II AAFD, adjunctive procedures are often employed to decrease biomechanical strain of the posterior tibial tendon, in addition to simple repair of the damaged tissue. One such procedure is the medializing calcaneal osteotomy (MCO). This procedure is shown to shift mechanical pull of the Achilles tendon, medially improving inversion power, while shifting the weight-bearing axis of the heel closer to the long axis of the tibia, with reduced medial forefoot pressure.1 Advances in segmental foot analysis, utilizing temporal-spatial, kinematic and kinetic parameters have shown that surgical correction utilizing repair of the posterior tibial tendon with MCO shows these procedures are effective in restoring objective measures of walking velocity, hind foot motion and ankle power. This was performed utilizing comparisons to control groups and the contralateral limb, in which there was no statistical difference between cadence and walking velocity, with minimal changes in step length and single support times when evaluating peak measurements in relation to time.

“Biomechanical analysis has also shown that there is room for improvement in procedures currently being performed.”

A prime example is the effect of a superior translation on Achilles tendon with a MCO in an attempt to negate lateral forefoot pain. The resultant lateral forefoot loading is a constant source of pain and discomfort for patients, clinically negating an otherwise successfully surgery. Gait analysis produced values showing that the increased lateral forefoot pressure must be addressed in order to prevent further irritation from the MCO procedure. Cadaveric analysis of loading showed that a superior translation of approximately 5 mm produced results that not only decreased lateral forefoot procedures, but also decreased medial forefoot pressures. Biomechanical studies have not only validated our surgical procedure choices, but also allowed us to make...
improvements to decrease post-operative complications, resulting in added patient benefit.

Total Ankle Arthroplasty (TAA) is a surgical treatment option that has been gaining popularity over the last decade. As technology continues to advance on such aspects as making a more anatomically correct implant, easier to use surgical guides, and better prosthesis, the success rate continues to improve. TAA is reserved for treatment of end stage ankle arthritis, as an alternative to arthrodesis. Interestingly, this procedure has been shown in a number of studies that most patients only gain an average of 5 degrees of dorsiflexion postoperatively, despite resection of osteophytes in the periarticular ankle gutters. Given that a traumatic event to the ankle joint is the overwhelming major etiology of osteoarthritis, it has been suggested that previous angular deformity due to contracted or overstretched ligaments could be a cause of both the low range of motion increase post-operatively, as well as coronal plane angular deformities, specifically varus angulation, following implantation. To further examine the ligamentous impact on coronal plane deformities, the ligaments can be broken down into two groups: those that guide ankle motion and those that limit ankle motion. Biomechanical analysis through gait cycle has proven that selective release, or elongation of dynamic ligaments with normal motion, shows to aid in rearfoot to remain in a varus position. Removal of varus deformity has also successfully been achieved with recession of the posterior tibial tendon at the level of the myotendinous junction. This allows for a minimally invasive release away from the primary surgical site, and with known anatomical landmarks, can be easily reproduced. Given the small size of the ligaments about the ankle joint, coupled with the relatively new TAA procedure when compared to Total Knee Arthroplasty, the effects of each individual anatomic structure on post-operative outcomes are still poorly understood.

“**What we do know is that advances in the ability to perform biomechanical analysis have tremendously helped to advance the understanding shortcomings of the TAA, how to make improvements, and aid in ultimate success and longevity of the procedure.”**

Technology and medicine are flourishing at an astronomical rate of advancement, with their intimate relationship ultimately benefiting patients tremendously. One such example is the continued research and development of a supine plantar pressure measurement apparatus for use intra-operatively to guide decision making. Knowing the ultimate goal of surgery is to create a plantigrade, well-balanced foot, companies are attempting to perfect a system that makes this outcome easier to obtain. This system could utilize plantar pressures to guide operative decision making in terms of the amount of bony and soft tissue correction needed. This could be done by several parameters, including returning pressure parameters to known, normal values, which can then be compared to both preoperative and postoperative values, also taking into account contralateral plantar pressures. This could help avoid costly mistakes such as lateral column overload, etc. Advances are allowing plantar pressures to be accurately and reliably performed from a supine position, with good intra and inter-rater reliability.

Mathematical and statistical analysis is allowing for equivalence of measurements, taking such forces into consideration as load being applied to the foot perpendicular to gravity in the supine position, whereas in vertical posture and gait they are parallel, and influenced by postural sway. As technology improves, a system such as this could be cost effective, easy to use, and in your operating room in the very near future.

**REFERENCES**

4. Ellis, SJ; Hillstrom, H; Cheng, R; et. al. The Development of an Intraoperative Plantar Pressure Assistive Device. Foot and Ankle International. 30-4: 335-340, 2009
5. Brodsky, JW; Charlick, DA; Coleman, SC; et. al. Hindfoot Motion following Reconstruction for Posterior Tibial Tendon Dysfunction. Foot and Ankle International. 30-7: 613-618, 2009
WHY CASE LOGGING IS IMPORTANT

Gina Painter, DPM, Director ABPM

The old medical adage “if it’s not documented, you did not do it” holds true for residents, not only in their medical records, but in their case logging as well. Retrospectively, logging was just as difficult on paper as it is now on PRR (Podiatric Residency Resource). The importance of logging is only partially understood by most residents.

Logging is used by the Council on Podiatric Medical Education to ensure that your residency program is providing a diverse and acceptable number of podiatric medical and surgical cases.

Your hospital is visited by the RRC (Residency Review Committee) every 3 years. These representatives from the ABPM, ABPS, and CPME volunteer to scrutinize the logs and check them for accuracy, duplication, fragmentation, diversity, MAV’s, and proper logging technique. The goal of these visits is to produce parity in education of residents from New York to San Francisco and everywhere in between. This benefits the residents and the public we serve.

An accurate and complete resident log can and will be used in your future to prove to hospital credentialing committees, insurance companies and employers that your experience was comprehensive. It gives them the confidence to give you privileges to practice in their facility, their practice, and provide services to their subscribers.

Just imagine as an employer looking at 2 applications...

**Applicant #1** has a well-written resume, but has a limited number of experiences logged, without diversity.

**Applicant #2** has a well-written resume, but has a plethora of experiences logged, which includes a variety of surgical cases, as well as biomechanical experiences, wound care experiences, including debridement, focal and global history and physicals, pediatric cases, including surgical and conservative, casting, orthotics, etc.

Who would you expect to be hired?

Of course the person with the most experience!

Case logging is a common mistake.

It is often learned from the previous resident. But what if that resident is doing it incorrectly? You will learn the same mistakes.

As a resident, there are numerous avenues you could explore to learn proper logging. The PRR website is a good resource. There are also tutorials on various websites through the CPME, APMA, ABPM and ABPS. Speak with your residency director to help with accurate logging and finding other resources.

**Just remember...**

Be specific as to procedure name; Include limb side, location, digit, metatarsal, etc.; Do not fragment procedures; Do include all hospital, surgical center or office experiences; When in doubt... Ask; Keep it up to date – log daily to ensure accuracy and prevent duplication; Verify your logs should be verified by your director regularly. If your logs aren’t complete, that can’t be done. It makes your residency director’s job much more difficult and can become an area of deficiency during a site visit by the RRC.

Do not think of this as a burden, think of logging as a daily chore – necessary (like brushing your teeth).

In a few years you will be exceedingly relieved you took the time to do the work – an investment in your future that you need to make now.

Happy Logging !!!
ESSENTIALS AND TIPS FOR ACCURATE ORTHOPEDIC FOOT AND ANKLE DIAGNOSIS

James Cancelleri, DPM, Diplomate

Arriving at an accurate and targeted foot and ankle orthopedic diagnosis demands disciplined application of experienced reasoning and learned scientific principles. Every day, we walk into a treatment room and almost immediate to meeting a new patient for the first time, we are challenged with a line of questions from the patient, such as, “what do you think it is, Doctor?,” or “what causes this?” to an even more ominous, “will I have to live with this for the rest of my life?”

Trying to maintain our composure and professionalism, we soon recover from the barrage of inquiries and ask the patient, “Well, can you tell me what happened and where does it hurt?” Try to maintain eye-to-eye contact and be aware of a friendly, warm, and caring body language. Let the patient talk and express why they came to your office. Be patient, listen.

Try to get your patient to define the main reason why they are here in your office. It is very common for patients to want to tell you everything that they know about their foot or their ankle, even to the extent of irrelevant remote familial pedal history without regard to the time or place of chief complaint. Help the patient re-focus to what is truly their pain. Have them place their index finger on the one place where it hurts most, or even to use a marking pen. Ask if there are any other areas that hurt, and have them point to those as well. If an injury occurred, help the patient to re-enact the position and direction of the force. Be careful not to lead the patient into a biased diagnosis with leading questions. Be accurate, not assuming. Listen first, paying attention to what they are saying or trying to say. Don’t be tempted to shoot from the hip. Get the big picture, but don’t get caught up and distracted by detail. It depends on the type of detail that is being described. Some patients muck the water with detail. For other patients, the detail can and should lead you down an intriguing path of diagnostic differentiation. Be wary of distractors.

Identify the location and mentally note the anatomy involved. Look for cardinal signs of infection, i.e. calor, dolor, odor, rubor, edema. Is there ecchymosis? Any other skin changes involved? A patient may come to you having seen other doctors, either podiatric, orthopedic, or another specialty, all of whom have diagnosed and treated this patient for plantar fasciitis that has failed treatment. Sure enough, as you press and palpate the plantar medial aspect of the heel the patient winces in pain, but with close inspection and a discerning eye, you find a well circumscribed non-pigmented hyperkeratotic lesion. Without comment, you press around the target area and every time that you land on the hyperkeratosis, the patient jumps. Predictably after a little re-assurance and palliative excision of the lesion, the long-endured “plantar fasciitis” is resolved and you’re a hero.

Look for the obvious first. Listen to your patient’s description of the current pain: is it dull, aching, throbbing, sharp, shooting, burning, deep, intermittent, or constant? Inquire and drill down on frequency. Does “all the time” mean every minute, every day, or every week? Connect with your patient individually and let them to lead you to an accurate diagnosis. Using your palpation skills, you can identify layers of anatomy and the reaction of the patient when those structures are stressed. It is our good fortune as podiatrists, that there is almost always a “control” to our study, baseline normal, albeit the contralateral lower extremity. Visual comparison
followed by further testing can help you identify what is a normal anomaly vs. a true pathology. Always have the patient take off both shoes and socks, no exceptions. Look for the bad stuff first. You should be alerted to temperature asymmetry of lower extremities. Is it of vascular etiology or does it have a neurogenic relation; complex regional pain syndrome (CRPS) demands alert diagnosis. Never miss a possible DVT, so order that duplex scan STAT.

Lower extremity orthopedic injuries can often be predictable in presentation based on the history. Was there a direct ankle inversion described? Was a fall involved or did the patient hear or feel a snap?

“An orthopedic lower extremity exam should be consistent, repetitive, and systematic through critical anatomic landmarks.”

Start proximally and palpate the fibular head. What about the fibular head, Maisonneuve fracture? Check for bony pain or any neuritis. Check the calf for a Homan Sign or tenderness and swelling. Then, check the tendoachillites at the musculotendinous junction, the critical zone, and the insertion. Is there a positive or negative Thompson Test? Working distally, you should palpate the lateral and medial malleoli, the anterior ankle mortise, the subtalar joint and posterior talus. Don’t finalize the diagnosis before you have finished the examination; there may be one, two, or three pertinent diagnoses. For example a “simple” ankle sprain may lead you to an osteochondral lesion on the talar dome or a tibial-fibular syndesmosis injury; perhaps a LisFranc’s injury. Just look for them. Evaluate and compare ROM with the contralateral limb. Is there limitation or pain with end range of motion? Palpate and assess the level of pain of each component of lateral ligamentous structures, including the fibio-fibular syndesmosis. Similarly check the deltoid ligament. Is there a positive anterior drawer sign?

In the foot, a common oversight on the part of clinicians is to fail to diagnose a fifth metatarsal fracture in conjunction with an ankle sprain. Check for fifth metatarsal base pain and the navicular tuberosity with respective tendinous attachments. Look for the anterior calcaneal process fracture, as it’s easy to miss. Palpate the anterior calcaneal process and correlate with radiographs if there is a trauma history. Be sure to palpate into base of the first intermetatarsal space for a LisFranc’s injury as well as all midfoot bones. Then, individually palpate each component of each metatarsal and check for a positive Mulder’s Sign across the board. A “Morton’s neuroma” may have a neighboring metatarsal head fracture. Inspect the metatarsophalangeal joints for appearance, position, and range of motion. Finally, but perhaps not last, have your patient stand and perform double and single heel rises. Assess for foot position while facing you and from the back as well. Is there asymmetry? Is there a positive “too many toes sign”? Keep going, be complete, be all you can be. Again, don’t jump to conclusions. You wouldn’t want to tell a patient about the brace for the sprain and then have to backtrack for the fracture and the cast. Maintain your professional posture and avoid subjecting yourself to premature commitment and embarrassment. Don’t speculate, diagnose. Correlate x-rays and imaging studies with your present physical examination. Know what you know, but keep an open mind and spirit. Design your examination systematically and methodically to consistent execution. Although the patient’s history may leave you baffled, persevere with your examination and find where it leads you. Look at the x-rays with digital magnification, and correlate the findings. Does the location of the pain align with the radiographic findings? Realize that two or more concurrent diagnoses may be present, even in juxtaposition, i.e. a neuroma and a metatarsal stress fracture. Don’t miss one or both. A differential diagnosis can mature into a working diagnosis pending advanced medical imaging or lab work. Thoroughly know the anatomy involved because if you’re off by 5mm, you may misdiagnose. An excellent chair side examination and history taking, including palpation of critical contact areas, vascular exam, muscle testing, neurological testing, and gait analysis can prove its weight in gold over shotgun prescription of outside studies.

What types of shoes does the patient wear? Knowing this can help you to understand the daily dynamics of the patient’s activity and stresses to their foot and ankle. Ask every patient, as part of your general interview, what kinds of shoes they wear. Ask, “what do you wear on your feet around the house?” Expect a surprised look as the patient responds, “Oh, I just go barefooted or wear slippers.” Patients need to help themselves with appropriate footwear all of the time. Remind them that eye glasses are worn from the time they arise in the morning until they go to bed. The same should apply to shoe wear.

“Similar to a detective pulling all of the available information and evidence before charging a suspect, use all of your available tools together for an accurate diagnosis. Rely on the evidence and be prepared to defend the diagnosis based on that evidence. You may be asked to do so someday.”
LOOK FOR ABPM
Conferences in 2013

July 21 – 24, 2013
APMA Annual Scientific Meeting
The Venetian/The Palazzo Congress
Center and Sands Expo, Las Vegas, NV
Annual Meeting of Members
Wednesday, 7/24
ABPM Reception immediately following
Cocktails and hors d’oeuvres will be served

August 23 – 25, 2013
Present Residency Summit East
Teaneck Marriott Glenpointe, Teaneck, NJ

October 24 – 26, 2013
Present Superbones West Conference
Bellagio Resort & Casino, Las Vegas, NV

November 20 – 22, 2013
Present Desert Foot Conference
Sheraton Phoenix Downtown Hotel,
Phoenix, AZ

LIASION REPRESENTATIVES TO OTHER ORGANIZATIONS

American College of Foot and Ankle Orthopedics and Medicine Liaison
David George, DPM (NJ)
American Association of Women Podiatrists (AAWP)
Gina Painter, DPM (MT)
American Podiatric Medical Association
Jim Stavosky, DPM (CA)
David George, DPM (NJ)
Lester Jones, DPM (CA)
Collaborative Residency Evaluator Committee (CREC)
Gregg Young, DPM (UT)
William Chagares, DPM (IL)
Committee on Balance
Steve Goldman, DPM (NY)
Council of Teaching Hospitals (COTH)
Steve Goldman, DPM (NY)
Joint Committee on the Recognition of Specialty Boards (JCRSB)
Michael Robinson, DPM (MA)
Residency Review Committee (RRC)
Elliot Michael, DPM (OR)
Steve Geller, DPM (AZ)