

HAND SURGERY

Q U A R T E R L Y



HARD THERAPY AND AFFILIATES' CORNER

Vargas 2004: Guatemala

Sharon Dest, PT, CHT

Last August, I had the privilege of traveling with Dr. Miguel Pirela-Cruz, Dr. Mukund Patel, and Dr. Warren Schubert to Guatemala as the 2004 Vargas International Hand Therapy Teaching Award recipient.

Guatemala is one of the poorest countries in Central America. More than half the population has no access to healthcare. Congenital deformities are commonplace because of malnutrition. Burns occur frequently as 60% of the population is without electricity, relying on candles and fire for their needs. "Childproofing" is unheard of.

The Vargas committee and chairperson Lynn Bassini, MA, OTR, CHT created a very ambitious 11 day mission program consisting of a 2-day hand surgery/therapy conference followed by a week of surgery and

therapy. The mission team was comprised of surgeons, therapists, nurses, OR technicians, and lay volunteers from New York, Connecticut, Texas, and Minnesota.

Paula Galavitz, OTR, CHT was co-recipient of the 2004 Vargas award. In the conversations she and I had in preparing for the trip I had come to find great comfort in the idea of having another therapist, especially one as skilled and personable as Paula, to share in this experience. When Paula had to withdraw from the trip she generously shared her splinting lecture materials for the conference. Her presence was missed and her generosity appreciated greatly.

I arrived in Guatemala City as part of the New York contingent. There the Guatemalan Pediatric Foundation acted as host to our

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The waiting room of the Pediatric Foundation on "clinic day."



Sharon Dest, PT, CHT, at right, with patient at therapy clinic.

How Did You Do That?

The clinical topic for this issue is pediatric hand trauma. One of the tricky things about pediatric trauma is making the right diagnosis in the ER. Is that a fracture or an accessory center of ossification?

How can you tell if a bone made entirely of cartilage has fractured? Does this fracture need a special workup? Of course, there are special images, lab work, and consults that can be ordered, but often it is a clinician's intuition that guides decision-making—one of the reasons why experience counts so heavily in the management of pediatric trauma.

How to use intuition to maximum advantage, while avoiding being a slave to first impressions, is the topic of a fascinating new book—*BLINK*, by Malcolm Gladwell (Little, Brown, 2005). In this slim but instructive volume, Gladwell tells us what is good, and what is bad, about our intuitions, how they work, and how we can control them to maximal effect.

The book starts with examples of how intuition can lead to the correct answer, even when the facts seem to point otherwise. The Getty Museum in Los Angeles bought a Greek statue for millions of dollars, on the basis of the advice of technical experts who verified the age of its marble. Artistic experts, though, were suspicious. Something wasn't right about the way the hands were carved. Though they couldn't put their finger on why, the statue was somehow off-putting esthetically. And, finally, the art experts were proven right. The statue was a forgery. And, from speed dating to marriage counseling to policemen

trying to decide if a scared kid has a gun, Gladwell describes numerous examples of intuitions working out correct solutions to complex problems in the blink of an eye (hence the title), and contrasts that to the 'paralysis by analysis' that is its antithesis.

But intuition can go tragically wrong, too. Gladwell cites the case of Amadou Diallo, a black man who died late at night in a hail of police bullets in a New York City apartment doorway. The policemen's intuition was that Diallo was acting suspiciously, and had pulled out a gun. Instead, Diallo was only pulling out his wallet.

Why was the art experts' intuition right, and the police officers' wrong? According to Gladwell, our most egregious misuse of intuition is when it comes to our tendency to draw conclusions about a person's abilities from their physical attributes. Gladwell calls it the Warren Harding effect, after the famously ineffective President, who by all accounts was elected primarily because he looked so darned Presidential. Think things have changed? Then why are so many CEO's of above average height? Do you really think that short people have less business skill?

Gladwell even gives us a way to test our own subconscious prejudices. The Implicit Association Test (IAT) asks us to quickly associate concepts like skin color, gender, or sexual orientation with other concepts like good and bad, or smart and dumb. With reaction times measured in fractions of a second, we can't tell any difference in our speed of association, or in patterns of association, ourselves—we are sure, for example, that it is as easy to associate either good or bad with a black or white face. But we are wrong. In almost every group—including African Americans—after a black face appears our reaction time to respond to a negative attribute

speeds up. So does our likelihood of mistaking a good for a bad attribute. That is what happened to Amadou Diallo. In the split second in which the policemen had to decide, their intuition reacted to an expectation of association. Diallo had a wallet, but the policemen 'saw' a gun. Think you are immune to this kind of snap judgment prejudice? I suggest that you go to the IAT web site, www.implicit.harvard.edu, and take the racial bias demonstration test first. Your intuitions are likely to be as flawed as the policemen's. In which case, be grateful that you were not there that night.

It becomes clear very quickly that intuition is not a casual skill. In order to be effective, intuition must be honed regularly by practice and systematic observation. From data such as that obtained from the IAT,



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we can learn to identify, and compensate for, our prejudices. Gladwell calls it creating white space—a pause to reflect a moment before jumping to a conclusion. Ironically, policemen who work alone are less prone to a Diallo-like error—the lack of back up makes the solo officer pause and reflect before acting. We can also use research to identify how to focus our intuition better, so we use that blink of an eye to see what really matters, and not extraneous detail. For example, to get back to those pediatric xrays, we know that local swelling and point tenderness should raise suspicion of a fracture, and that any fracture in a baby who is not yet walking should raise a question of abuse or neglect. Yes, we can check calciums, look for blue sclerae and all the rest, but our screen, our blink, can be limited to that one simple fact: a baby has a fracture. Something is not right here.

The bottom line is that intuition is inherently neither good nor bad. It is a tool that we can use, though, to cut through extraneous data and arrive at the heart of the matter. Like any other tool, it is one whose proper application requires study and practice. And it is a tool of particular use to clinicians, who must sort through ever increasing mounds of data on their patients every day. Improve your clinical intuition, and your patients will thank you. I can see it—in the blink of an eye. **H**

Chasing the Cheese

The only thing that we know with any certainty is that nothing is certain and change is inevitable. In the Spring 2005 *Hand Surgery Quarterly*, I discussed some of the issues that the Board of Directors is supporting as it continues to strive to respond to the numerous changes that specifically impact hand surgery. In this issue, I would like to draw the membership's attention to a simple and entertaining book by Dr. Spencer Johnson, *Who Moved My Cheese?*¹

This is a parable of four characters that live in a maze and look for cheese to satisfy their needs for happiness and nourishment. Two are mice named Sniff and Scurry and two are "little people", Hem and Haw, who are the size of mice but surprisingly look and act a lot like hand surgeons. In this short novel, cheese is a metaphor for whatever you want in life. At the start of the story, Sniff and Scurry and Hem and Haw have found a stable cheese station in the maze and are very happy. One day, however, the cheese disappears. The mice, being the simple creatures they are, respond to this change by looking for cheese elsewhere. They quickly find an alternate cheese station and do well. By contrast, Hem and Haw, the more intelligent "little people/hand surgeons", are perplexed and frustrated with the disappearance of their cheese. They analyze the situation over and over. Days pass and they grow unhappy. Weeks pass and they grow very hungry. Finally Haw realizes that the cheese is not coming back and he ventures out into unknown parts of the maze in search of new cheese. His travels into the

unknown areas of the maze are difficult, dangerous and frightening; but eventually he finds a bigger and better cheese station. To help his more timid friend Hem, he writes messages on the walls of the maze. Here are some of them. To quote Dr. Spencer Johnson,

"Change happens—they keep moving the cheese.

Anticipate change—get ready for the cheese to move.

Monitor change—smell the cheese often so you know when it is getting old.

Adapt to change quickly. The quicker you let go of old cheese, the sooner you can enjoy new cheese.

Change—move the cheese.

Enjoy change—savor the adventure and the taste of new cheese.

Be ready to quickly change again and again—they keep moving the cheese."

Especially in these changing times this is a good parable to remember. Rest assured your Board of Directors is alert to any movement of the "cheese" and is always open for new "tastes" even if it requires hard work and sacrifice.

Another book has relevance for our association. *The Tipping Point*² by Malcolm Gladwell is also a short book with a big message. *The Tipping Point* is a recipe for how small things can make a big difference. In part, Gladwell talks about the importance of bringing together in an organization individuals with different talents in order to reach a true "tipping point" where exciting new things can happen. Gladwell suggests that individuals can be *connectors*, *mavens*, or *salesmen* and that when individuals with these different talents get together, great things can happen. The word "maven" comes from Yiddish and it



**SUSAN MACKINNON,
MD**

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FROM THE PRESIDENT

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means one who accumulates knowledge. *Mavens* read, study, and research. They have the database. They are the teachers but they aren't persuaders and they are not necessarily connected. A *connector* is someone who knows a lot of people in different worlds, subcultures, and niches. They tend to be gregarious and intensely social. They may not have the great idea, but they can disseminate the idea to a large number of individuals. The last group that Gladwell describes is the *salesmen/women*. They have the skills to persuade the unconvinced and are critical in taking an outstanding idea and tipping it into a working reality. So the mavens are the data banks, the connectors are the social glue, knowing people from all walks of life, and the salesmen can pitch the idea and make it stick.

Our association has a membership with a wide breadth of talent and the Board of Directors is grateful for all of your contributions. Our members come together to make a big difference, allowing multiple tipping points, not only for the good of our Association but for the benefit of our patients. If there are any connectors, salesmen or mavens that would like to contribute more to the Association, please contact me or any of the board members.

Along the line of helping out, the Association, in conjunction with the American Society for Surgery of the Hand, has developed a task force for medical student education. "Lending a Hand" is in the process of establishing a group of volunteer hand surgeons who would spend time with the first year medical students in the anatomy cadaver laboratory. The intention of this program is to introduce hand surgery to these young medical students, potentially mentoring bright medical students towards our specialty. Drs. Steven Moran and Thomas

Hunt are our representatives. If any of you would like to contribute your time to this very worthwhile endeavor, please contact Steve or Tom through our most capable director, Laura Downes Leeper, CAE at the AAHS Central Office.

Christine Novak, our Program Chair, has been working diligently to organize an outstanding program for all of us this January. Don't be shocked, but on the first day of the meeting we have planned a symposium on challenging nerve compression problems in the upper extremity. We have an exceptional faculty who will discuss everything from carpal tunnel to work-relatedness, return-to-work and medical legal issues. Please plan to arrive in Tucson on Tuesday, January 10, so you can attend this symposium on Wednesday, January 11 which will be followed by the Bioskills courses in the afternoon. The remainder of the program will be comprised of interesting panels, instructional courses, scientific paper sessions, keynote speakers and hand therapy day. The program will include discussions on challenging wrist pain, nerve injury cases, operative pearls and a lively debate to "defend your plate" for distal radius fractures. Of

course on Saturday January 14, our program will combine with the ASPN and ASRM for a very exciting morning. I recently made a site visit to the Loews Ventana Resort with my two daughters. We spent a long and arduous day lounging by the pool, working out in the fitness room, and tuning up at the spa. This is a gorgeous resort. You will be receiving e-mail information from the spa so that you and your companions can sign up for spa services, as you know these book up early. The same goes for an outstanding restaurant, Janos, ten minutes from the resort. (I recommend the lamb three ways!)

Finally, thank you to everyone on the AAHS committees that is doing such a superb job this year. The mid-year Board of Directors meeting is in July, and if there are any specific issues that any of the membership would like addressed, please let me know (314-362-4586).

H

- 1 "Who Moved My Cheese", Spencer Johnson, M.D., G. P. Putnam's Sons, New York 1998.
- 2 "The Tipping Point", Malcolm Gladwell, Little, Brown & Co., New York 2000.

AAHS PEOPLE IN THE NEWS

Scott H. Kozin, MD Chosen as Top Doctor by Philadelphia Magazine



Top Honors were awarded to Scott Kozin, MD, a Hand & Upper Extremity Surgeon at Shriners Hospital for Children. *Philadelphia Magazine's* annual medical issue focuses on area physicians choosing "The Best of their Peers." Under the category of Hand Surgery, Kozin was chosen as the Top Doctor for his specialty area, which is treating children with congenital anomalies, especially congenital defects and paralysis after brachial plexus and spinal cord injuries.

Selection was made by Castle Connolly Medical Ltd., an independent research and publishing company, who conducted this medical survey. Their goals were to survey physicians and find doctors who are at the peak of their profession—"to bring you the local doctors other doctors say they'd choose to tend to their own families," stated Sandy Hingston, Editor, *Philadelphia Magazine*. **H**

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mission. The Foundation facilitated customs, provided drivers and vans, co-sponsored the conference, and allowed us to use their clinic, surgical, and therapy facilities for our mission work.

Our first two days were spent in Antigua City where we were joined by the other mission members and



Lynn Bassini, MA, OTR, CHT and Sharon Dest, PT, CHT teaching local orthotist splinting techniques.

their families and an American nurse now living in Antigua. We used our time there to become better acquainted with the people and customs of Guatemala and the other members of our team. While there, we toured Hermano Pedro, a charitable facility that provides virtually all the healthcare needs of the community. This facility has very little government funding and subsists mainly on donations and volunteerism. There we met our first patient, a young woman named Velma, a quadriplegic. I returned to Hermano Pedro the next day with my splinting tools to fabricate bilateral opponens splints for her. We also arranged for Velma to meet us in Guatemala City for the surgical portion of the mission for a flexor tenodesis to further improve the functionality of her grasp. After visiting some local spots, including a marketplace, art gallery, and jade

factory, we then moved on to Guatemala City.

First business in Guatemala City was a two-day Hand Surgery and Therapy Conference, co-hosted by AAHS, the Guatemalan Pediatric Foundation, Guatemalan Association of Hand Surgery, and Help the Children. The bi-lingual conference was offered free of charge to healthcare providers and students. We anticipated 100 attendees and hoped for 150. Attendance was over 375 the first day and surpassed 400 the second! Speakers included local dignitaries, educators and surgeons, and mission members Lynn Bassini, Drs. Cruz, Patel, Schubert, and Cho, and



Left to right: Miguel Pirela-Cruz, MD, Warren Schubert, MD, and Mukund Patel, MD at conference.

myself. I might mention at this time that I had never lectured before. (My daughter had to teach me how to do PowerPoint and Dorit Aaron provided last minute assistance with one of my three lectures.) Everyone in the team was very supportive. Dr. Cruz was especially helpful in giving me pointers on my presentations beforehand. Thankfully, my anticipated case of nerves never came about. Lynn Bassini and Tzippy Cohen, the other hand therapists accompanying our team, assisted me with a splinting lecture/demonstration. The reception from the people attending the conference, their enthusiasm and attention, was



Splinting lab at conference (from left) Lynn Bassini, OTR/L, CHT, Tzippy Cohen, OTR/L and Sharon Dest, PT, CHT.

overwhelming. The opportunity to connect with our Guatemalan counterparts was exciting. The conference promises to be the foundation for other cooperative efforts between peers and new friends, including Dr. Gustavo Lopez, the Guatemalan Hand Surgery Association, and the newly established Guatemalan Hand Therapy Society.

After the conference, there was no time to rest on our laurels. The next day was clinic day at the Pediatric Foundation. Local churches and other organizations put out notices about the arrival of specialists. People came days ahead of time from all over Guatemala's adjoining areas to register. The team, now joined by Dr. Cadena, evaluated over 100 patients in one day. I've never experienced the unending line of children with burn contractures and congenital deformities and the occasional mismanaged or untreated orthopedic problem. A few families anxious for medical intervention brought patients with other "non-hand" conditions to be seen. For the patients and their families, emotions varied from desperation to hope, from disappointment to relief, but always gratitude for having the chance to be examined. I felt amazed, fatigued, and overwhelmed, but ultimately reconciled to the limitations of time and

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resources of the mission. Forty patients were scheduled for surgery during the week. Others were scheduled for therapy for splinting,



The Hospitalito operating room

home exercises and scar management education.

The surgical teams worked at the "Hospitalito", a house converted into a surgical center by the Foundation. The days consisted of long hours in very basic conditions. Surgeries included releases of scar contractures, grafting, and correcting congenital deformities. The population was primarily pediatric with a few adults. The availability of follow-up care for the patients after our departure was always a critical factor in the surgeons' decisions as to who would have surgery and which procedure could safely be performed. One boy was deemed so involved that they reluctantly deferred surgery. Later, arrangements were made for him to come to Texas for his contracture releases.

While the others were at the Hospitalito, I was at the Foundation's therapy clinic. I was



The Hospitalito recovery room

warned that I shouldn't count on being able to acquire anything when in Guatemala and brought many supplies with me from the US. As prepared as I thought I was, I found myself scavenging for some unanticipated supplies. Live and learn! Helpers came in the form of Lynn, Tzippy, the orthotists whose casting room I had taken, and college student translators. Over five days, I saw patients identified on clinic day, and post-op for evaluation, exercises, and splints. These children and their parents all stole my heart away! The final day, an enthusiastic therapist who had

attended the conference brought a group of elderly patients to the clinic for splinting. The week's total for therapy: 45 patients evaluated and treated, 60 splints made. We tried to never lose sight of the primary goal of the Vargas: education. In the midst of patient care, time was made in the clinic to teach basic splinting to the orthotists and therapists so follow-up would be available to the patients.

It was a week of long busy days but we still took time each evening to get together for dinner to relax and regroup. I like to say we "ate" our way around the diverse



The "team" visiting an art gallery in Antigua City.

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cuisines available in Guatemala City. The Fundacion also treated us to a goodbye dinner where we were able to discuss what we had accomplished in our time in Guatemala and what we wanted to see grow from these efforts. The most exciting development was the establishment of The Guatemala Healing Hands Foundation by Lynn Bassini with several mission members on the board of directors, including myself. GHHF will be returning to Guatemala November 2005 to continue its mission to provide hand surgery and therapy education, and surgery/therapy services to the underprivileged.

After the rest of the mission team left, I stayed on in Guatemala on my own for several days to visit the Mayan ruins of Tikal in the rainforests, Chichicastanango (the largest open air marketplace in Central America) and Lake Atitlan, a magnificent lake ringed by three volcanoes. It still amazes me that a country can be so poor yet so stunningly beautiful.

I was told that I'd never be the same after going on a mission. I know now just how true that is. The people of Guatemala touched my heart with their quiet dignity in spite of abject poverty. The opportunity for me to be part of this team of amazing, caring, talented people was truly a gift. Every day we try to improve the quality of peoples' lives by using our skills as therapists or surgeons. To be able to offer these things to people who would otherwise go without is gratifying beyond description. My only regret upon leaving Guatemala was that there was so much more to be done. I'll be part of the mission returning to Guatemala in November and I suspect more times in the future. Thank you, AAHS, for the wonderful "gift" of the Vargas Award. **H**



Sandy Robinson, OTR, CHT

Sandy Robinson, OTR, CHT

Education/Career Experience: BS in Occupational Therapy from the University of Buffalo followed by continued formal classroom and clinical education at the Medical College of Virginia in the early years of the Hand Master's Program. I had the good fortune to begin my career working with Wyndell Merritt, MD and Maureen Hardy, MS, PT, CHT at the Hand Management Center, MCV in Richmond Virginia. For the past 20 years, I have been the Clinical Director of the Hand Management Center of St. Joseph's Hospital in Elmira, NY.

AAHS Involvement: Affiliate member since 2000. AAHS is appealing because of the more informal nature of its meetings, the combination of therapist and surgeons in the same meetings and the wonderful settings for each meeting.

Best Part of My Job: Mentoring a group of "thinking" therapists who plan individualized treatment for each patient despite what the protocol may be.

Major Accomplishments: Directing the development of a high quality rural Hand Center that has grown from one therapist to five, and from four referral sources to over 90.

Clinical Specialties: I most enjoy working with the arthritis patient population but also enjoy the challenge of managing the patient with a complex injury involving multiple systems.

Greatest Challenge: Staying focused on quality patient care in a rapidly changing health care and social environment and helping patients take "ownership" in their own health! **H**

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Senior Director at Large Nicholas Vedder, MD

Nicholas B. Vedder, MD is Professor of Surgery and Orthopaedics, Vice Chair of the Department of Surgery, and Chief of the Division of Plastic Surgery at the University of Washington in Seattle. He is a past Chair of the Plastic Surgery Research Council and is currently a Director of the American Board of Plastic Surgery, where he served on the Hand Advisory Council as the AAHS representative from 2000-2004 and currently serves as an ABPS representative on the Joint Committee for Surgery of the Hand. Dr. Vedder has been a member of the AAHS since 1995 and served as a Junior Director at Large from 1996-2000 and as Parliamentarian from 1999-2000. He is also currently the AAHS Alternate Delegate to the AMA. He has participated in, organized and moderated a number of educational panels and symposia of the Association and has served on the program committee. He has also held officer positions in numerous other, regional and national organizations. In addition to Surgery and Plastic Surgery, he holds active certification in Surgery of the Hand.

Nick is a native of Chicago, but after meeting his future wife at Stanford as an undergraduate, he has been a committed "west-coaster" ever since and has lived in the Seattle area for 22 of the last 24 years. It was during the two years in Boston as a Plastic Surgery resident under former AAHS President Jim May at the Massachusetts General Hospital, where Nick fell in love with hand surgery. Nick has always been attracted to the AAHS



because of its open, inclusive, and interdisciplinary nature, highlighting the best and brightest contributions to the science and education of hand surgery from surgeons and therapists from all backgrounds and disciplines, enjoying the benefits of collaboration, friendship, and mutual respect. He has always been

completely committed to hand surgery and his current academic practice at the University of Washington continues to focus almost exclusively on hand and extremity reconstruction. As program director of one of the most highly sought after Plastic Surgery residencies, he takes great joy in enlightening residents in Plastic Surgery, Surgery, and Orthopedics to the joys and intrinsic rewards of hand surgery. Since 1990, he has collaborated with his Orthopedic hand colleagues at the University of Washington to build a model, truly combined Orthopedic-Plastic Surgery hand service that centers

around one of the top hand surgery training programs nationwide.

Nick is also a very active member of the ASSH and has served on a number of ASSH committees; including the program committee on several occasions and is co-chair of the highly successful ASSH Annual Comprehensive Review Course. He strongly believes that the AAHS plays a unique and critical role in promoting the science and education of hand surgery and that close cooperation and collaboration between the two major hand societies is extremely important to the future of the specialty.

Nick has two children, Katie (18) and Nick (16). His wife, Susan Heckbert, MD is a Professor of Epidemiology at the University of Washington and a world-renown cardiovascular epidemiologist. For many years they have enjoyed the annual AAHS meeting as a family event and hope to continue to do so in the future. **H**

Don't miss Bone2005 Granada, Spain, October 26-29, 2005

Bone2005 is a multidisciplinary congress where many specialists can benefit from greater knowledge of bone tissue. You can neither treat bone pathologies without knowledge of basic investigation, nor have a good investigation without assessing problems and results in hospitals and clinics. This three-day conference combines basic and applied knowledge and presents contributions dedicated to each one of the specialties.

For information on the congress, as well as on the unique city of Granada, Director Juan Jose Garcia invites you to visit the official web site at <http://www.bonefoundation.com/bone2005>, or contact:

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Pediatric Hand Trauma

For this discussion on pediatric hand trauma, the same surgeons as for the instructional course at the AAHS annual meeting have volunteered to share their expertise for the benefit of the membership. Moderating the discussion is Michael Bednar, MD, Chief, Division of Hand Surgery, Associate Professor, Dept of Orthopaedic Surgery and Rehabilitation, Loyola University–Chicago. Joining him are Terry R. Light, MD, Dr. William M. Scholl Professor and Chairman, Dept of Orthopaedic Surgery and Rehabilitation, Loyola University School of Medicine in Maywood, IL; Scott Kozin, MD, Associate Professor, Dept of Orthopaedic Surgery, Temple University, and Upper Extremity Surgeon, Shriners Hospital for Children, Philadelphia, PA; and Lynn Bassini, MA, OTR, CHT, Empire State Occupational Therapy, P. C., New York, NY.

Dr. Bednar: While many pediatric hand trauma conditions can be treated in the same fashion as their adult counterparts, children aren't always little adults. Today, we want to concentrate on the conditions that are unique to the pediatric hand. Let's start with fingertip trauma and work proximally.

The most common type of trauma that we see in the pediatric hand is fingertip amputation, be it caught in a bicycle chain or in someone's car or kitchen door. Dr. Kozin, could you tell us how you treat these differently than in adults? Maybe there is a larger role for open treatment and composite grafting, particularly in a very young child.

Dr. Kozin: Children are definitely different than adults. In adults we have to obtain coverage of exposed bone. Coverage is not always necessary in children. We've all seen children with distal amputations treated with local wound care. Their fingertips granulate over the end of the bone, epithelialize, and regain good sensibility and excellent function. Therefore, we are non-aggressive with regard to soft tissue coverage unless coverage is necessary to maintain length.

Dr. Bednar: And up to what age is that applicable?

Dr. Kozin: In any growing child it's applicable. Certainly, the one or two year old that typically gets their hand caught in the door hinges or

the handle of a car door. However, even teenagers can often be treated with open treatment and they will granulate and epithelialize over time.

Dr. Bednar: The next problem is injury to the nail bed. I think the one pediatric nail bed injury that is unique is when the proximal nail, the lunula, is found on top of the eponychium. Dr. Light, how does it differ from its adult counterpart and what are the tips for recognizing this type of injury?

Dr. Light: The problem with this injury is that it actually an open fracture. You can't treat this injury by simply replacing the nail back in the fold because the replaced nail actually acts to seal off the open fracture. This makes it impossible for it to drain and creates a perfect site for infection to develop, often with osteomyelitis or septic arthritis as a result. It's important to recognize the nail flipped out of place that there may well be a deeper injury. You need to explore these injuries and not simply replace the nail. One frequently finds a transverse laceration in the nail bed. This rent communicates with the fracture. One should thoroughly irrigate the fracture, reduce the fracture, repair the nail bed and only then consider replacing the nail.

Once you've repaired the nail matrix and replaced the nail, the fracture is reasonably stable. If the repair is stable then I protect it with a splint. If the fracture is unstable,

then a simple longitudinal pin is sufficient fixation.

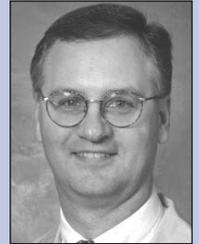
Dr. Bednar: Inadequate treatment of this injury can lead to disastrous results. I remember two individuals in which the nail bed was caught between the two ends of the fracture. In both instances, osteomyelitis developed requiring excision of the physis with fusion of the DIP joint. What was initially a relatively simple problem became a long-term dilemma.

Dr. Light: If this fracture is not adequately treated, growth arrest of the distal phalanx can occur. In a young child, the finger will develop a progressive deformity in the length of the distal phalanx and deformity of the fingernail.

Dr. Kozin: One of the clues to this fracture is that if you cannot reduce the fracture easily, you need to assume the matrix is in the fracture site.

Dr. Bednar: Are there certain tips you look for on the x-ray?

Dr. Kozin: I'm not convinced an x-ray helps you because the finger is often extended during the x-ray



IN SALTER II FRACTURES OF THE PROXIMAL PHALANX, FLEXING THE MP JOINTS TIGHTENS THE COLLATERAL LIGAMENTS HOLDING THE EPIPHYSEAL FRAGMENT.

MICHAEL BEDNAR, MD

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which relatively reduces the fracture. I think the clinical examination is more important than any x-ray. When you see the base of the nail flipped over the epineurial fold I think it's your responsibility to

explore that fracture and extricate any nail bed that's within the fracture site.

Dr. Light: The lateral x-ray may demonstrate a widening of the physis due to interposition of the torn nail matrix in the fracture site. In other cases the x-ray may appear normal and mask the original displacement.

Dr. Bednar: Finally, in talking about fingertip amputations and treatment of soft tissue injuries, one of the greatest challenges in treatment of these injuries is the child's dressing changes. Ms. Bassini, do you have some tips that you could give us on ways to

have children become involved in their therapy?

Ms. Bassini: Yes, it is a challenge because usually these children come in screaming and very scared. I try to find a way to distract them and gain their trust. The parent may need to help. We try to soothe, distract, and play while we are getting our work done. It may take several sessions until they can finally trust us.

Dr. Bednar: Let's move more proximally and talk about juxta-articular fractures. Dr. Light, would you review with us some of the work that you've done looking at the anatomy of the collateral ligaments,

central slip and terminal extensor tendons in relation to the physis?

Dr. Light: The fractures in kids at the inter-phalangeal joint level are different from the fractures that one sees at the metacarpo-phalangeal joint. This difference is a result of the relationship of the collateral ligaments to the physes. At the inter-phalangeal joints, the collateral ligaments attach just distal to the phalangeal neck. As a consequence, we often see sub-condylar fractures occurring at the PIP or DIP joints. The attachment of these ligaments distal to the physis substantially protects these epiphyses from fracture.

At the metacarpophalangeal joint level, the collateral ligament attaches to the metacarpal distal to the metacarpal epiphysis. Distally, the collateral ligament attaches to the epiphysis of the proximal phalanx. Because the collateral ligament does not extend to the metaphysis of the metacarpal or proximal phalanx, injuries at the metacarpophalangeal joint tend to involve the metacarpal or proximal phalangeal epiphysis with either Salter II or Salter III fractures.

Dr. Bednar: Next, let's talk about fractures somewhat unique to the pediatric hand: displaced Salter II fractures of the proximal phalanx, phalangeal neck fractures, and displaced epiphyseal fractures. Dr. Kozin, in a child with an extra octave fracture, do you stick a pencil between the fingers and push it over to reduce it?

Dr. Kozin: No, we don't. An extra octave fracture would be a Salter Harris fracture at the base of the proximal phalanx of the small finger, where the small finger is in valgus. We prefer to reduce this fracture by using some anesthesia and flexing the metacarpophalangeal joint. Then, we push the finger into varus to allow for correction of the angulation. Subsequently, the ring and small fingers are buddy taped and immobilized.

Dr. Bednar: Flexing the MP joints tightens the collateral ligaments

and holds the epiphyseal fragment.

Dr. Light, what about phalangeal neck fractures? In a young child, when so much of the head of the phalanx is cartilaginous, it is difficult to recognize the extent of this injury. What are your tips?

Dr. Light: Typically these fractures occur with hyperextension or crush. The displacement is hyperextension of the condylar segment. The lateral x-ray view is key in diagnosing these injuries in that both condyles should be superimposed upon one another projecting palmar to the palmar cortex of the phalanx. The recess in front of the condyles provides space for the phalanx to clear as it flexes. With hyperextension of the fracture interphalangeal flexion is blocked. If these injuries are diagnosed acutely, they can be treated in a percutaneous fashion using a mini C-arm. A single Kirschner wire is started distally and advanced proximally. If the fracture involves the middle phalangeal neck, the pin is advanced through the distal phalanx. The DIP joint is then extended until the joint is reduced; the pin is then advanced into the condylar segment. The K-wire is used as a joystick to flex the condylar segment and reduce the fracture. The pin is advanced through the middle phalanx to secure the reduction.

If the fracture involves the neck of the proximal phalanx, the pin is advanced through the distal phalanx, across the DIP and the PIP is reduced. The pin is advanced across the PIP and into the proximal phalangeal condylar segment. The fracture is reduced by bringing the condylar segment into alignment and the pin is advanced into the proximal phalanx.

Dr. Bednar: Dr. Kozin, is that your way of treating them?

Dr. Kozin: After closed reduction, I think a longitudinal pin is the easiest way to maintain reduction. After an open reduction for an irreducible fracture or late diagnosis, I tend to perform cross pin fixation.

Dr. Bednar: What do you mean by early percutaneous pinning?



WE MAY NEED TO CHANGE OUR WAY OF THINKING ABOUT SCAPHOID FRACTURES BECAUSE KIDS ARE SHOWING UP WITH DISPLACED WAIST FRACTURES.

SCOTT KOZIN, MD

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Dr. Kozin: Closed reduction is preferable within one week. If the finger is very swollen, there's no harm in waiting a few days for the swelling to diminish. After one week or so, the reduction becomes much more difficult.

Dr. Bednar: What do you do with one that's already healed in this extended posture?

Dr. Kozin: Typically if the fracture is 4 to 6 weeks old you can probably perform a percutaneous osteoclasis or a gentle open reduction. After 4 to 6 weeks, the fracture is united and I think you have to look at alternative means such as recreating a new sub-condylar recess or just accepting the amount of phalangeal malalignment and interphalangeal motion.

Dr. Light: We have long felt that because these fractures are distant from the physis there is relatively little remodeling potential. Barry Simmons published a series of phalangeal neck malunions treated without osteotomy but by sub-condylar volar bone resection. Sufficient bone is resected to reconstitute a new sub-condylar recess allowing flexion. I have found the technique to be very effective. A recent publication by Peter Waters has suggested that children may remodel and develop improved motion without secondary surgery. My preferred technique is secondary surgery to recreate the sub-condylar fossa in a child a year or two after injury who has shown little propensity to remodel. But if I saw a child at 4 or 5 months I would be inclined to wait a few months while monitoring any remodeling.

Dr. Kozin: I think this is one of the instances where therapy is beneficial. For remodeling you need motion, which may promote further flexion and ultimate remodeling.

Dr. Bednar: Ms. Bassini, how do you encourage a child with a traumatized hand to participate in therapy?

Ms. Bassini: Basically, we gather everything from our tool box of techniques and creativity, including blocking splints, casting and taping. We warm the extremity, following with stretching and exercises. These activities have to be appropriate for the child's age. We balance activities between those that are challenging and ones that are fun, so that the child can have success during the session. Parents have to be our partners. It is a team approach!

Dr. Bednar: Dr. Light, to change the subject somewhat, what are the clues you look for in displaced epiphyseal fractures?"

Dr. Light: These are often subtle injuries since the epiphysis is either not ossified or only minimally ossified at the time these injuries occur. Often the epiphysis and the articular surface remain congruent while the metaphyseal displacement is profound. In other injuries, the whole epiphysis may flip 180 degrees with its physeal surface in contact with the condyles. It remains important to assure that the ossified portion of the epiphysis and the shaft are collinear.

Dr. Kozin: Kids possess such thick periosteum that the displacement is even greater at the time of surgery and the cartilaginous piece is even bigger than expected. X-ray displacement often underestimates the deformity. Surgery may be necessary to ascertain the amount of displacement.

Dr. Kozin: Ms. Bassini, in your experience, have you found that a dynamic splint, serial cast or a static progressive splinting is more efficacious in children?

Ms. Bassini: I do not use too many dynamic splints with children. Those that I do use are simple, such as for a weak thumb extensor. Kids pull off the dynamic components. I use simple splints to position the wrist and fingers, but I prefer casting. Serial casting works best because I can secure it where I need it. It does not shift as much and is harder for a child to remove. Every

two to three days, I remove the cast, allow motion and recast.

Dr. Bednar: Moving proximally, Dr. Kozin, how do scaphoid fractures in kids differ from adult scaphoid fractures?

Dr. Kozin: It seems that scaphoid fractures in children are increasing in prevalence. In general, the scaphoid is not entirely ossified which confounds the diagnosis. We've always been taught that kids tend to break the distal third of the scaphoid and physicians need to keep worrying about this type of fracture. In a distal third fracture, the child is tender on the volar aspect of the scaphoid more than in the snuffbox. These fractures tend to heal with immobilization.

However, we may need to change our way of thinking because kids are also showing up with scaphoid waist fractures just like their adult counterparts. Kids enrolled in very aggressive sports at a very young age will fracture their scaphoid

in the same manner as adults. The displaced waist fracture is treated similar to adults. If the fracture is displaced, we recommend surgical intervention to reduce the displacement, stabilize the fracture, and increase the union rate.

Dr. Light: I believe that the ossification sequence of the scaphoid affects the injury patterns. The scaphoid ossifies eccentrically, beginning with ossification of the distal portion. With age the ossification progresses proximally. Fractures tend to occur within the ossified portion. In children 10 or 12 years old the fractures tend to occur distally while in 14 and 16 year olds you see more waist fractures.

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**DISSOCIATIVE
INJURIES REMAIN
UNUSUAL IN KIDS.
MORE COMMONLY WE
SEE NONDISSOCIATIVE
PATTERNS WITH
MIDCARPAL
INSTABILITIES.**

TERRY LIGHT, MD

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Dr. Kozin: If the fracture is displaced, I perform an open reduction and place a headless screw. Percutaneous pin fixation has always been a difficult endeavor, especially in a displaced scaphoid fracture.



BASICALLY, I GATHER EVERYTHING FROM OUR TOOL BOX OF TECHNIQUES AND CREATIVITY, INCLUDING BLOCKING SPLINTS, CASTING AND TAPING.

LYNN BASSINI, MA, OTR, CHT

Dr. Bednar: What about the younger child whose scaphoid hasn't ossified but who clinically has a scaphoid fracture?

Dr. Kozin: If the fracture occurs in the distal third, they usually don't need surgery. If the fracture is a displaced waist fracture, I use a dorsal approach and cannulated screw fixation.

Dr. Bednar: The other carpal injury that we're concerned about is the combined injuries, the scapho capitate fractures and combination of greater and lesser arc injuries. Dr. Kozin, what's your experience?

Dr. Kozin: These are uncommon injuries. They're difficult to diagnose because the entire carpus is not ossified. In general we use similar treatment principles for children as we do in adults, meaning that we try to obtain anatomic reduction. The injury is usually one of high velocity and requires advanced imaging studies to look more accurately at the remaining carpals.

Dr. Light: When the carpus is primarily cartilaginous it takes a tremendous amount of force to injure it. But once you've applied that amount of force to the carpus chances are it is going to give away in a couple of different places. If

you see an unusual carpal fracture you should look very hard to see whether there are additional carpal fractures. I think MRI is really very helpful in evaluating these combined injuries.

Dr. Bednar: I would agree that these are in particular, high-energy injuries. The last one of these I saw was an 11 year old who fell 20 feet from a fire escape, who not only had a trans-scaphoid trans-capitate, trans-hamate fracture on one wrist, but also a both bone forearm fracture on the other side, a femur fracture and a closed head injury.

What is the likelihood of ligament injuries in kids? Dr. Light, I think you have some thoughts about ligament injuries in kids.

Dr. Light: Dissociative injuries— injuries within a single carpal row—remain unusual. Though there have been individual case reports they are relatively uncommon. More commonly I think we see non-dissociative patterns with midcarpal instabilities in a variety of settings. I think the ligaments binding the scaphoid and the lunate together, and lunate and triquetrum together, are again relatively resilient to injury.

Dr. Bednar: What about the triangular fibrocartilage complex? Dr. Kozin, do you think TFCC injuries occur in kids the way they do in adults?

Dr. Kozin: TFC injuries are not as prevalent in kids as they are in adults. However, I think many subtle injuries are unrecognized and remain asymptomatic. We are seeing more TFC pathology now, but it's primarily related to the high level athlete, like the gymnast. The TFC can tear from the radial insertion or from the peripheral margin, depending on the mechanism of injury.

Dr. Bednar: Peter Waters wrote an article about TFCC injuries in kids and how they can be diagnosed arthroscopically. I have to admit that opened my eyes to a number of children who have had similar

pathology and have been successfully been treated by arthroscopic repair of peripheral TFCC tears.

Dr. Kozin: What's interesting is that kids with TFC tears often act just like adults with TFC tears. In other words, the acute tears with a peripheral lesion will do well with arthroscopic repair.

Dr. Bednar: I completely agree. A last topic about the wrist is the problem of radial physeal arrest, with subsequent overgrowth of the ulna. What type of fracture pattern is going to lead to physeal arrest? When you see the child initially, what tips you off that they may get into this problem in the future? What's the evaluation and treatment? Dr. Kozin, you probably see a fair number of these problems.

Dr. Kozin: Distal radius growth arrest is often referred for evaluation. Most growth arrests tend to be partial, which is actually worse than a complete arrest because the wrist tends to develop an angular deformity. All kids with a displaced distal radius fracture should be followed radiographically to make sure they don't have a physeal arrest. I've seen physeal arrest from severely displaced fractures and from mildly displaced fractures.

Dr. Bednar: How long do you follow them?

Dr. Kozin: We tend to obtain an x-ray at 3 months and then usually at either 6 months or a year post-fracture.

Dr. Bednar: So now that you've made the diagnosis, what are your tools to evaluate it and decide on treatment? Dr. Light, what have you found helpful?

Dr. Light: First of all, girls are going to close their physes at a younger age than boys. Next, what's the nature of the arrest? Is it a complete or a partial arrest? If it's a partial arrest, is there substantial growth remaining and how much of the physis is involved? I think a CT scan is often very helpful in understanding the geography of the

arrest. It can help determine how much of the physis is simply tethered, where the arrest has taken place, and how much of the remaining physis is competent but just unable to express it or longitudinally grow. If the bar is less than 50% of the cross section (preferably 25% or less), there is at least a year's growth remaining, then I'd direct my efforts towards trying to resect the bar. At the same time I'd consider doing an epiphysiodesis of the ulna since you probably aren't going to completely catch up with what is probably already an overly long ulna.

Dr. Bednar: Dr. Kozin, any thoughts that you have about treatment of these physeal arrests?

Dr. Kozin: I agree with Dr. Light. Once the physeal bar is larger than forty or fifty percent, then I think you have to look at alternative efforts to correct the position of the radius and have a low threshold for stopping the growth of the ulna. If you continue to wait, the deformity

will worsen. Early intervention is better than late intervention.

Dr. Bednar: Let's talk about some of the soft tissue injuries we see. Diagnosing flexor tendon lacerations can be problematic in children. Asking a 4 year old to individually flex the DIP joint to assess profundus function can be difficult. Ms. Bassini, what's your experience with seeing kids after they've been traumatized and helping to further identify injuries that may have occurred? Let's say that a child is sent to you for wound care and you see that there may be other problems with the hand. Or, what if a child had a flexor tendon repair and you suspect that they may have ruptured the repair? What do you do?

Ms. Bassini: Sometimes when you want the child to perform the range of motion and cooperate, they don't or can't. I try to get the child to play using the movement that I am looking for them to do. I also encourage them to use all their fingers while

playing, observing the normal cascade or lack of movement.

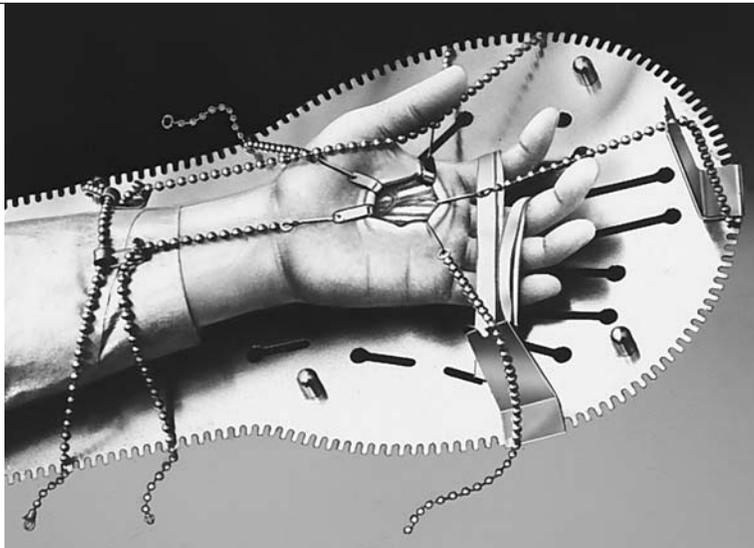
Dr. Kozin: I think one of the problems after flexor tendon repair is that we do not need much DIP joint motion for activities of daily living. Often after flexor tendon repairs in children, you don't observe much DIP motion. If you obtain adequate PIP motion and adequate hand function, that may be the best you can achieve.

Ms. Bassini: If they can get the composite flexion, get their finger to reach the palm and use the finger for play and school activities, then over time, these kids will improve and have a good result.

Dr. Bednar: Dr. Kozin, what techniques do you use to look at whether a child has a tendon laceration or not?

Dr. Kozin: In our practice, if we think a child has tendon laceration, then exploration is performed to assess the degree of laceration, and

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whether there's any associated digital nerve or artery involvement. You must rely on your physical examination via the lack of digital cascade or active motion.

Dr. Bednar: Some of the techniques that I have found helpful are the tenodesis effect, moving the wrist from flexion to extension and looking at the change in position of the fingers. Sometimes forearm compression can also put increased tension on the tendons and allow the fingers to come into flexion. And unlike adults where I've used ultrasound to look at flexor tendons, I've found at our institution that ultrasound is not terribly helpful in the pediatric hand.

Dr. Light, how do you repair these tendon lacerations? Many papers are written on multiple strands of suture crossing the flexor tendon with early active motion. What do you favor for a zone 2 flexor tendon repair in a child?

Dr. Light: Though the repair and rehabilitation of flexor tendons injuries in the adult patient has become more aggressive in recent years, children are no more cooperative than in the past. It remains difficult if not impossible for children to comply with our complex adult post-operative regimens. Therefore, I still use a two strand Kessler type of repair with a peripheral epitendinous suture in the child's relatively small flexor tendon. I usually repair the tendon and then immobilize the finger, hand, wrist and often the elbow in a cast for at least 3 weeks before beginning a therapy program.

Dr. Bednar: And that's for children up to about how old?

Dr. Light: Probably about 10 or 12 depending on their degree of cooperation and compliance. If I think that they will be non-compliant then I may use a cast in kids up to 14 or 15.

Dr. Bednar: I think that was one of Strickland's papers which showed that kids under the age of 10 tend to do pretty well with cast immobilization in terms of regaining range of motion afterwards. Dr. Kozin, do you agree with that too or do you like to get kids moving sooner?

Dr. Kozin: Dr. Bednar, I don't trust any child.

Dr. Bednar: You've been a parent a long time.

Dr. Kozin: I have. I cast all the kids above the elbow up to 10 or older. I use a simple Kessler suture with an epitendinous repair just to try and prevent gapping.

Dr. Bednar: Ms. Bassini, how about protocols for the older children? What tendon protocols do you like to use?

Ms. Bassini: Children at any age are difficult to trust with a delicate tendon protocol. I would also rather work on a stiff finger than have to deal with a child under my care, who ruptures their tendon. I protect and immobilize in the cast or splint for the first 3-4 weeks, above the elbow if necessary. At 4 to 6 weeks, we allow active range of motion and still protect in a splint for a total of 6 weeks. Sports are not allowed for 12 weeks. If I have parents that cooperate we start passive range of motion in my office only, as early as 1 to 2 weeks, but they remain immobilized for up to 4 weeks. Teenagers may be too active, and rarely have I used early active or dynamic splinting. Over time, the young population does well.

Dr. Bednar: Dr. Kozin, you mentioned nerve injuries also as a reason for exploring a laceration in a child. Tell me about how you assess whether nerves are intact in kids in different age groups.

Dr. Kozin: I think the sensibility examination in kids is one of the hardest assessments to perform. You have to understand that kids really can't be tested for sensibility until at least the age of 9. Whether it is a nerve laceration or an

impending Volkman's ischemic contracture, you have to have a low threshold for operating on the child based upon the premise that kids don't understand "numbness." If you think the nerve is cut you have to explore the laceration. The only test that does help is the water test. You place the injured hand into warm water and assess for wrinkling. If they do wrinkle or prune on that side, then usually the nerve is intact.

Dr. Light: I have found that the parental acceptance of a negative exploration is good. We explain that the opportunity for an excellent result is going to be greater if you explore it relatively acutely. And in those cases in which you find an intact nerve, the family is always very happy when you explain the findings and the outcome. The other tip that I use is that if the family tells me that they saw a tremendous amount of bleeding when the injury occurred, then I'm concerned that the child not only injured their digital nerve, but also the digital artery. When you see a relatively small laceration that was said to have bled quite a bit, think about a digital nerve injury in addition to the digital artery.

Dr. Kozin: I think we both agree that the problem with kids is determining sensibility. In addition, early repair is better than late reconstruction.

Ms. Bassini: We also use the wrinkle test. Two point discrimination and Semmes Weinstein is very unreliable with children. As they get older, we can trust the results more. We have them play with vision and without, and watch the normal cascade of fingers or lack of movement.

Dr. Kozin: I think what Ms. Bassini says is exactly right. Kids will not use insensate fingers within a sensate hand.

Ms. Bassini: Absolutely. They'll find amazing ways to complete the task leaving that finger out.

Dr. Bednar: Well, finally let's talk about the ultimate injury that happens to a hand and that's an amputation of either a digit or the hand itself. It has been said that amputation of any body part in a child is an indication for replantation, but I recently I saw an 11 year old with stiff and insensate index and middle fingers one year after a replantation. Dr. Kozin, do you think it's true that any body part in a child should be put back on?

Dr. Kozin: Just like in adults, the thumb is an indication for replantation. I'm just not sure about surgical digit replantation. The replants that we've done on kids have certainly not been a home run. They've provided them with a digit that makes the parents happy, but the kid often bypasses the digit during daily tasks and uses the other digits for fine function. The results in kids are better than in adults; about eighty percent of them get some growth, with adequate return of sensibility.

Dr. Bednar: Dr. Light, what's been your experience with these children?

Dr. Light: I think that it's a decision that is best made in the operating room. We never promise the patient, the referring physician or the family that we will replant a part. We look at the part and judge it in context bearing in mind that many parts will have less than normal longitudinal growth. That having been said, in children it is our policy to attempt reattachment of most parts.

Ms. Bassini: Children have greater cortical plasticity than adults. If you give the child enough time to play, re-learn and explore, they will begin to use the finger. It may not be the same, but if encouraged to use it at home and in therapy, they will get some function.

Dr. Bednar: I think this discussion has brought to light a number of differences that we see between the pediatric and the adult hand. I'd like to thank all the panelists for their contributions. **H**

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Pediatric Hand Trauma

The topic for this issue of *Hand Surgery Quarterly* and the Coding Corner is pediatric hand trauma. While this can encompass a broad spectrum of injuries, the Coding Corner will review fingertip injuries and fractures of the distal radius and forearm in children. Coding for care related to these areas should be relatively straightforward.

Fingertip injuries in children usually arise from crushing mechanisms associated with closing car doors or hinged sources, such as door jambs or folding chairs. Operative care for these injuries typically involves both bone and soft tissue elements as well as care for the nail bed. Debriding an open wound can be coded with the 1104x

family of codes, depending upon the depth and severity of debridement required. 11040 applies to debridement of partial thickness skin loss; 11041, 11042, 11043, and 11044 refer to debridement of injuries that extend to full thickness skin, fat, muscle, and bone, respectively. The 1101x family of codes follows a similar sequence of injury severity (11010, 11011, 11012) but refers to debridement of skin/fat, muscle, or bone in association with an open fracture.

Since suturing of a fingertip crushing type injury usually does not require layer closure, coding for the closure of this type of wound would be limited to either 12001 (2.5 cm wound or less) or 12002 (2.5 to 7.6 cm wound). Most of the time, skin closure would be included in the code for a more complex procedure, although closure codes may be appropriate if cleaning and closure of a pulp laceration constitutes the main procedure.

Nail bed care is coded with 11760 (repair of nail bed) or 11762 (reconstruction of nail bed with graft). Evacuation of a subungual hematoma can be code for as well (11740) although this rarely needs to be done in an operating room setting.

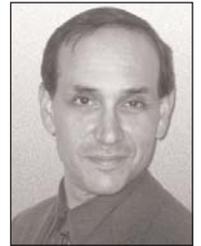
Distal phalangeal fractures are not uncommon in association with fingertip injuries. For closed treatment of a distal phalanx fracture, code 26750 (without manipulation) or code 26755 (with manipulation) can be used. Code 26756 applies to percutaneous fixation of a distal phalangeal fracture, and code 26765 applies to open treatment of a distal phalangeal fracture.

Skin grafts and flaps are rarely needed for management of fingertip injuries in children and will be covered in a subsequent Coding Corner column.

Fractures of the distal radius and forearm are also very common summertime injuries that occur in children. Code 25600 applies to closed treatment of a distal radius fracture (or growth plate injury) without manipulation. If a reduction is required, then code 25605 applies. Percutaneous fixation of a distal radius fracture corresponds to code 25611, while open treatment via any means is coded with 25620.

Closed treatment of a Galeazzi lesion is coded with 25520, whereas open treatment of the same injury pattern corresponds to 25525. If the distal radial-ulnar joint needs to be treated open, then code 25526 applies.

Note that treatment of a Monteggia lesion corresponds to codes that are in the elbow region of the CPT guide. Code 24620 corresponds to closed treatment of a Monteggia lesion, while code 24635 corresponds to open management of a Monteggia fracture/dislocation. By the way, another very com-



LEON S. BENSON, MD

Fingertip Injuries

11040	Debridement; skin, partial thickness
11041	Debridement; skin, full thickness
11042	Debridement; skin, and subcutaneous tissue
11043	Debridement; skin, subcutaneous tissue, and muscle
11044	Debridement; skin, subcutaneous tissue, muscle, and bone
11010	Debridement including removal of foreign material associated with open fracture; skin and subcutaneous tissue
11011	Debridement associated with open fracture, skin, fat, muscle fascia, and muscle
11012	Debridement associated with open fracture, skin, fat, muscle, and bone
12001	Simple repair of wound on hands, 2.5 cm or less (no layer closure)
12002	Simple repair of wound on hands, 2.5 to 7.5 cm (no layer closure)
11760	Repair of nail bed
11762	Reconstruction of nail bed with graft
11740	Evacuation of subungual hematoma
26750	Closed treatment of distal phalangeal fracture, finger or thumb, without manipulation
26755	Closed treatment of distal phalangeal fracture, finger or thumb, with manipulation
26756	Percutaneous fixation of distal phalangeal fracture, finger or thumb, each
26765	Open treatment of distal phalangeal fracture, finger or thumb, with or without internal or external fixation, each

CODING CORNER

continued from page 17

mon childhood injury, the nursemaid's elbow, has its own code describing closed reduction of a radial head subluxation (code 24640).

The last childhood injury to be reviewed here is the both bone forearm fracture. Codes 25500 and 25505 refer to closed treatment of a radial shaft fracture, without or with manipulation, respectively.

Similarly, codes 25530 and 25535 refer to closed treatment of an ulnar shaft fracture, without or with manipulation, respectively. Code 25515 refers to open treatment of a radius shaft fracture, and code 25545 refers to open treatment of just an ulnar shaft fracture. In reality, these codes sets are rarely used since an isolated fracture of just the radius or ulna shaft (without a corresponding fracture or dislocation in the other bone) is not common.

A much more frequent scenario is treatment of the both bone frac-

ture in children. Code 25560 applies to closed treatment of the radius and ulnar shaft fracture without manipulation, while code 25565 applies to the same injury treated with manipulation. If just one of the fractured shafts (radius or ulna) needs to be treated open (including use of an intramedullary pin), then code 25574 is appropriate. If both bones require internal fixation, then 25575 is the proper code.

You Code It

A five year old boy presents after sustaining a car door injury to his left long fingertip—and after jerking his arm out of the closed car door, fell onto his right forearm. He presents with a left long fingertip nail bed laceration and distal phalanx fracture that is angulated and communicates with the nail bed laceration. He also has a right distal radius torus type fracture. You elect to operatively irrigate the left long fingertip wound, reduce and pin the distal phalanx fracture, and repair the nail bed. You also apply a forearm based cast to treat the right distal radius fracture, which requires no manipulation.

Solution:

- 25600 Closed treatment of distal radius fracture, without manipulation
- 26765-51 Open treatment of distal phalanx fracture
- 11012-51 Debridement of wound associated with open fracture
- 11760-51 Repair of nail bed

Note that the code for open treatment of distal phalanx is used instead of the percutaneous pinning code, because the fracture site is exposed through nail bed and is directly reduced. Note also that while there is technically no muscle present in the fingertip wound, the proper debridement code is the only one that references bone. **H**

Distal Radius Fractures

25600	Closed treatment of distal radius fracture or epiphyseal separation, with or without fracture of ulnar styloid, without manipulation
25605	Closed treatment of distal radius fracture or epiphyseal separation, with or without fracture of ulnar styloid, with manipulation
25611	Percutaneous skeletal fixation of distal radius fracture or epiphyseal separation, with or without fracture of ulnar styloid, requiring manipulation, with or without external fixation
25620	Open treatment of distal radius fracture or epiphyseal separation, with or without fracture of ulnar styloid, with or without internal or external fixation

Forearm Fractures

25500	Closed treatment of radial shaft fracture; without manipulation
25505	Closed treatment of radial shaft fracture; with manipulation
25530	Closed treatment of ulnar shaft fracture; without manipulation
25535	Closed treatment of ulnar shaft fracture; with manipulation
25515	Open treatment of radius shaft fracture, with or without internal or external fixation
25545	Open treatment of ulnar shaft fracture, with or without internal or external fixation
25520	Closed treatment of radius shaft fracture and closed treatment of DRUJ dislocation (Galeazzi)
25525	Open treatment of radius shaft fracture, with or without internal or external fixation, and closed treatment of DRUJ dislocation (Galeazzi)
25526	Open treatment of radius shaft fracture, with or without internal or external fixation, and open treatment, with or without internal or external fixation, of DRUJ dislocation (Galeazzi)
24620	Closed treatment of Monteggia lesion, with manipulation
24635	Open treatment of Monteggia lesion, with or without internal or external fixation
24640	Closed treatment of radial head subluxation in child, with manipulation (nursemaid)
25560	Closed treatment of radius and ulna shaft fractures; without manipulation
25565	Closed treatment of radius and ulna shaft fractures; with manipulation
25574	Open treatment of radius and ulna shaft fractures, with internal or external fixation or radius OR ulna shaft
25575	Open treatment of radius and ulna shaft fractures, with internal or external fixation or radius AND ulna shaft

Our Financial Status Remains Solid

Last January, I assumed the position of AAHS treasurer from the capable hands of Dr. Brad Meland who has now moved on as Vice President. Needless to say he did an excellent job in his three years as treasurer and all members of the AAHS owe him a debt of gratitude. It is a pleasure to report to you the financial report for the year 2004.

Although not as strong as in 2003, the overall financial status of the AAHS remains very solid. This is a tribute to the fine management services of the Central Office under the leadership of Laura Downes-Leeper, CAE, as well as the fine leadership of our past and present officers including Susan Mackinnon, Ron Palmer and Brad Meland. We also owe gratitude to our financial advisor, Jeffrey Palmer with Smith Barney who has navigated the rough waters of the volatile market over the past several years.

Our income from dues again dropped indicating a decline in active membership. Although a successful and enjoyable meeting was held in beautiful Palm Springs, income from the annual meeting also dropped by about \$28,000. Despite this, the annual meeting still netted a profit of \$22,073. Although down from 2003, investment income was still positive, as noted in Table 1.

Table 1

Income	2002	2003	2004
Dues	\$188,077	\$185,120	\$167,527
Annual Meeting	\$250,557	\$251,527	\$223,219
Net Annual Meeting	\$29,679	\$34,871	\$22,073
Investment Income	(\$91,327)	\$134,084	\$32,270

With the exception of publication costs and the annual meeting, expenses continued to rise as noted in Table 2. Administration costs rose modestly with cost of living whereas board and committee costs rose significantly due to increased growth and activity. However most expenses were close to budgeted amounts.

Despite decreasing income and increasing expenses with a negative income, the AAHS remains strong with a steady growth in net assets. (Table 3). Most professional organizations are facing similar problems of decreasing membership and increasing costs. The executive committee will continue to be vigilant in the management of your organization. With your help, the AAHS will remain a preeminent organization in the field of hand

Table 2

Expenses	2002	2003	2004
Publications	\$44,096	\$36,201	\$35,005
Annual Meeting	\$220,878	\$216,656	\$201,146
Board/Committee	\$57,539	\$65,730	\$102,685
Administration	\$152,513	\$159,479	\$176,533

Table 3

	2002	2003	2004
TOTAL INCOME	\$415,522	\$633,875	\$502,882
TOTAL EXPENSES	\$474,003	\$514,658	\$578,222
NET INCOME	(\$58,481)	\$119,217	(\$75,340)
NET ASSETS	\$895,993	\$985,570	\$1,004,627

surgery and hand therapy.

Along with serving as treasurer of the AAHS, I also have the pleasure of serving as treasurer/secretary of the Hand Surgery Endowment. The HSE was started several years ago by Robert Schenke and then passed on to the capable leadership of

Miguel Saldana who served as president until January of 2005. Alan Freeland now serves as president and is aggressively attempting to energize the growth of the HSE. The foundation presently has funds of nearly \$250,000 and hopes to rapidly grow over the next few years. Your support of the HSE will insure future research and will help keep future annual meetings affordable. Please consider a generous tax deductible gift this year.

I look forward to serving as your treasurer in the coming years. Please call me or the Central Office if you have questions or concerns about the financial status of the AAHS.

Richard E. Brown, MD, FACS
AAHS Treasurer 



RICHARD E. BROWN, MD

American Association for Hand Surgery Calendar

2005

July 8-10, 2005
Mid-Year Board of Directors'
Meeting
The Lodge & Spa at Cordillera
Edwards, CO

September 22-24, 2005
American Society for Surgery of
the Hand – 60th Annual Meeting
San Antonio, TX

2006

January 11-14, 2006
36th Annual Meeting
Loews Ventana Canyon Resort
Tucson, AZ

April 28-30, 2006
Brachial Plexus Course, hosted
by AAHS
Mayo Clinic
Rochester, MN

July 14-16, 2006
Mid-Year Board of Directors'
Meeting
The Broadmoor Hotel
Colorado Springs, CO

September 7-9, 2006
American Society for Surgery of
the Hand – 61st Annual Meeting
Washington, DC

2007

January 10-13, 2007
37th Annual Meeting
The Westin Rio Mar Beach Resort
Rio Grande, Puerto Rico

July 12-14, 2007
Mid-Year Board of Directors'
Meeting
Silverado Resort
Napa, CA

2008

January 9-12, 2008
38th Annual Meeting
The Westin Century Plaza Hotel & Spa
Beverly Hills, CA

2009

January 7-10, 2009
39th Annual Meeting
Grand Wailea Resort
Wailea, Maui, HI

2010

January 6-9, 2010
40th Annual Meeting
Boca Raton Resort & Beach Club
Boca Raton, FL

For information contact:
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HAND SURGERY
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