



# Department of Hand and Upper Extremity Update



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It has been a historic year for the Hand and Upper Extremity Section of the Department of Orthopaedic Surgery in the Perelman School of Medicine at the University of Pennsylvania. Dr. L. Scott Levin MD, FACS, led a team of pediatric and adult hand and microvascular surgeons to perform the world's first pediatric bilateral hand vascularized composite allotransplantation. The eight year old child Zion Harvey was the recipient. Zion, a quadramembral amputee due to sepsis, is on life-long immunosuppression therapy for a kidney transplant. After 18 months of planning the hand transplant team developed the surgical protocol through multiple training sessions and cadaveric trials. The collaboration of 40 surgeons, anesthesiologists, nurses and support personnel were required to coordinate the 11 hour procedure that took place at Children's Hospital of Philadelphia. With the extensive preparation the procedure proceeded smoothly as planned. Post-operatively Zion is progressing well while undergoing an extensive hand therapy program. It is expected that Zion's hands will grow normally over time as he is followed closely for evidence of rejection.

The hand surgery section has expanded as Dr. Benjamin Gray MD has joined the group. After his orthopaedic surgery residency at Washington University in St. Louis, Dr. Gray trained under Dr. Peter Stern MD at the University of Cincinnati for his hand surgical fellowship. Dr. Gray has quickly become an integral component of the department with a rapidly expanding clinical practice based at Pennsylvania Hospital, a keen interest in clinical research and strong dedication to teaching. Dr. Gray is currently pursuing a Masters of Science in Clinical Epidemiology. The experience will allow Dr. Gray to better develop his focus on out-comes research.

Under the direction of Dr. David Steinberg, the hand surgical fellowship also has expanded. The Accreditation Council for Graduate Medical Education (ACGME) has approved a second full time hand and microsurgical fellow. Our current fellows have been a remarkable asset to the section and will continue their academic pursuits when they finish their training. Dr. Stephanie Thibaudeau is completing her second year of fellowship and will return to McGill University to take a position in the Department of Plastic Surgery where she performed her residency training. Dr. Nikolas Kazmers, who completed his orthopedic surgery residency at Washington University at St. Louis, has accepted a position on the hand

surgery service at the University Of Utah School Of Medicine in the Department of Orthopaedic Surgery.

The second Penn Flap course for hand and microsurgery fellows and residents will take place July 9<sup>th</sup> and 10<sup>th</sup> at the Penn Orthopaedics Human Tissue lab. Local, regional and free tissue transfers will be reviewed during the two day course. In addition to soft tissue reconstruction, faculty from across the country will review nerve transfers and brachial plexus procedures with didactic lectures combined with cadaveric dissection.

The hand research program is expanding with the support of Annamarie Horan PhD, Colleen Pellegrini and Kara Napolitano. The service is currently involved in the NIH funded study "A clinical trial for the surgical treatment of distal radius fractures in the elderly." In addition, Dr. Levin is the principle investigator for the multicenter Axogen-sponsored study: A Multicenter, Prospective, Randomized, Subject and Evaluator Blinded Comparative Study of Nerve Cuffs and Advance Nerve Graft Evaluating Recovery Outcomes for the Repair of Nerve Discontinuities. Dr. Levin will oversee the fifteen participating sites throughout the country. Dr. Stephanie Thibaudeau MD with principle investigator David Steinberg MD was awarded the Bach Fund for the blinded randomized control trial to compare Tylenol 3 versus Ibuprofen/Acetaminophen for pain control and patient satisfaction after ambulatory hand surgery. The group is actively enrolling patients at this time.

The hand service hosted two visiting professors. Dr. Andrew Weiland MD, Professor of Orthopedic Surgery and Professor of Surgery (Plastic) at the Weill Cornell Medical College, discussed the evolution of the treatment of distal radius fractures and led a cadaveric dissection of thumb cmc arthroplasty and distal biceps repair. Dr. James Chang MD, the Johnson & Johnson Distinguished Professor and Chief of the Division of Plastic and Reconstructive Surgery at Stanford University, was the Leo Leung lecturer. During the combined plastic surgery and hand surgery grand rounds, Dr. Chang provided a captivating discussion of hand surgery and the art of Rodin. He later led cadaveric demonstration of radial forearm facial and post Interosseous flaps.

As this remarkable year comes to a close, it is exciting to consider the bright future in store for the hand surgical section.