DENVER HEALTH
Level One Care for ALL

Denver Health Orthopaedics In The News

Volume 6 March 2012

Case Study

Lateral of Knee

AP of femur

AP Tibia

AP Ankle

The featured trauma case is that of a 39 year-old woman who was transferred to Denver Health Medical Center for management of a mangled lower extremity injury resulting from a motorcycle collision.

Her injuries were limited to her left lower extremity, and they included a type 3A open distal femur fracture, a closed proximal tibia fracture, and a type 3B open distal tibial pilon fracture with segmental bone loss. After initial resuscitation, she was counseled regarding operative management, and she elected to proceed with an attempted limb salvage protocol.

After debridement of her open injuries and external fixation, she underwent staged internal fixation of her multiple fractures. We proceeded with open reduction and internal fixation of her distal femur and proximal tibia fractures. This was followed by open reduction and internal fixation of her comminuted distal tibial pilon fracture. Her segmental bone defect was managed initially with an antibiotic cement spacer, in anticipation of a staged bone graft. She had a medial soft tissue defect that required formal flap coverage. Initially, this was treated with a sural artery rotational flap. This failed and required revision to a free gracilis flap one month after her injury.

After her gracilis flap had healed completely, she underwent a staged bone graft of her distal tibial segemental defect. This was performed using bone harvested from her right femur using an intramedullary Reamer-Irrigator-Aspirator System.

The physicians at Denver Health's Center for Complex Fractures and Limb Restoration are highly specialized and available 24 hours a day to provide orthopaedic trauma and surgery coverage.

Physician consults are also available 24 hours a day, seven days a week.

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Case Study

Post-op Ap Femur

Post-op Lateral Femur

Post-op AP Tibia

Post-op Lateral Tibia

Post-op

She required subsequent debridement of an infected flap site, but this resolved, and her segmental bone graft consolidated. After six months, she required a grafting procedure for nonunion of her femur. This was performed using a recombinant BMP-2 graft, as she did not want to undergo harvest of her pelvis.

Eventually, all her fractures healed, and she resumed full weight-bearing activity eleven months after her injury. She remains active, and returned to work. Despite the recommendations of some of her surgeons, she remains an avid motorcycle enthusiast.

Denver Health to test new treatment for Acute Spinal Cord Injury

Denver Health is the first of nearly 30 trauma centers in North America approved to participate in a clinical trial to test the safety and efficacy of a new medication for the treatment of acute traumatic cervical SCI.

This is a multicenter, randomized, double-blind, placebo controlled Phase II study. The drug, "SUN13837," is a novel molecule, biochemically related to basic fibroblast growth factor. It will be administered intravenously within 12 hours to adult patients with C4-C7 complete ASIA A tetraplegia. Subjects will be treated for 28 days and followed for 6 months to document changes in motor function and independence.

Principal site investigator:
Susan Ladley-O'Brien M.D.,
Associate Professor of PMR
Board Certified in Spinal Cord Injury Medicine

Spine Surgery Co-investigators:
Philip Stahel M.D., Director of Orthopedics
Todd VanderHeiden M.D.
Kathryn Beauchamp M.D.

For patient referrals, call 303-436-3555 or e-mail cfx@dhha.org

Denver Health Welcomes Two New Orthopaedic Surgery Staff

Cyril Mauffrey, M.D.,

Cyril Mauffrey, M.D., has joined Denver Health as an orthopedic trauma surgeon specializing in periaricular, pelvic and acetabular fracture and joint replacement of the hips and knees.

Dr. Mauffrey graduated from the University of Turin Medical School in 2002, and completed a residency in surgery through The Royal College of Surgeons of Britain in 2006. He then joined a higher surgical training in Orthopedic surgery through the Royal College of Surgeons of Britain where he gained his board certification in 2010 (FRCS). He completed an Orthopedic trauma fellowship at the University of Louisville in 2011.

Cyril Mauffrey, M.D.

Rodrigo Banegas, M.D.

Rodrigo Banegas, M.D.

Denver Health is pleased to welcome Rodrigo Banegas, M.D., to Denver Health. Dr. Banegas specializes in hand replantation and served as the head of the harvesting team for the Kleinert Kutz Hand Care Center in Louisville, Kentucky, where he performed a successful double-hand transplantation and three single hand transplantations.

Rodrigo Banegas joins Denver Health's regional Level I Trauma Center and Center for Complex Fractures and Limb Restoration, the region's only 24/7/365 hand-/microvascular replantation service.

Dr. Banegas graduated from National University of Rosario, Argentina School of Medicine, in 1994. He completed his residency in Orthopaedic Surgery at Hospital de Emergencias Clemente Alvarez in Rosario, Argentina, followed by two years of post-graduate training in hand and upper extremities surgery. In 2007, he completed a fellowship at the Christine M. Kleinert Institute for Hand and Microsurgery in Louisville, KY. He continued on as a senior fellow and clinical instructor at the University of Louisville Hospital.

Dr. Banegas is member of the Argentinian Society of Hand Surgeons, the International Society for Peripheral Nerve and Brachial Plexus Injuries, and the Argentinean Association of Orthopaedic Surgeons.

His special interests include brachial plexus and peripheral nerve injuries, microsurgery and upper extremity injuries, wrist and small joint arthroscopy, and soft tissue reconstruction.

Edited by Jarrod King, M.D.,
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Recent Denver Health Orthopaedics Citations

Agudelo JF, Flierl MA, Smith WR, Moore EE, Williams AE, Eckels PC, Morgan SJ, Stahel PF. Influence of preoperative 7.5% hypertonic saline on neutrophil activation after reamed intramedullary nailing of femur shaft fractures: a prospective randomized pilot study. *J Orthop Trauma.* 2012; 26(2):86-91

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Mauffrey C, Baraza N, Lewis C, Seligson D. Open reduction and internal fixation versus primary total elbow arthroplasty of displaced, intra-articular fractures of the distal humerus in the elderly: A systematic review of the literature. *Current Orthopaedic practice.* 2011;23(1):59-62.

Toker S, Morgan S, Hak DJ. Fixing the almost healed ankle fracture. Are surgery, reduction, and complication rate different from acute open reduction and internal fixation? *Curr Ortho Prac.* 2012;23(1):34-37

Mehler PS, Colwell CB, Stahel PF. A structured approach to improving patient safety: Lessons from a public safety-net system. *Patient Safety in Surgery 2011,* 5:32.