The Limb Lengthening and Reconstruction Society: ASAMI–North America

Sixteenth Annual Scientific Meeting Abstract Form

Please complete entirely and return as an attachment via e-mail to ksyzdek@assocconvspec.com or on diskette to Karen Syzdek, P.O. Box 91868, Austin, TX 78709–1868 by March 51, 2006. Questions? Contact Karen at (512) 301–7328 or ksyzdek@assocconvspec.com.

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Select all that apply: Category	What was the question? Can external fixation be used to accomplish femoral reconstruction for deformity, leg length discrepancy (LLD), nonunions, and bone defects?
 <u>Limb Lengthening</u> Trauma, Acute <u>Nonunions</u> 	How did you answer the question? We retrospectively reviewed our experience using external fixation for femoral reconstruction in 47 consecutive femora in 43 patients. The primary goal was lengthening in 21, deformity correction in 12, and repair of nonunion/hone defect in 10 patients. Deformities included varue (16), values (20).
 <u>Deformity Correction</u> Research Deformity Analysis Other: 	12, and repair of nonunion/ bone defect in 10 patients. Deformities included varus (16), valgus (20), recurvatum (2), procurvatum (3), internal rotation (8), and external rotation (2). Average age was 31 (range, 9-89). Associated conditions included osteomyelitis (4), diabetes (2), rheumatoid arthritis (3), and neuropathy (5). Bone grafting was done in eleven patients. Quadricepsplasty was done in 10 patients for knee contracture. Additional tibial surgery was done in 13 patients. Three femora were treated with a planned IM nailing after distraction. Circular frames were used for 11 and monolateral frames were used for 36 femora. Clinical and radiographic data were analyzed.
Deadline: March 15, 2006	What are the results? Average follow-up was 42 months (range, 9-77). Average time in frame was 6 months (range, 1-18). Bone lengthening of 5 cm (range, 1-10) was performed in 31 femora and the external fixation index (EFI) for this subgroup was 2 months/ cm (range, 0.2-3.1). LLD improved from 4 cm (range, 0-17) to 1 cm (0-9). Varus deformity improved from a mechanical axis deviation (MAD) 36 mm medial (range, 6-100) to 9 mm medial (0-44). Valgus deformity improved from MAD 24 mm lateral (range, 7-57) to 8 mm lateral (range, 0-43). The range of LDFA improved from 89 ^o (SD 8.4) to 89 ^o (SD 4.6). Knee range of motion did not substantially change from 0 ^o (SD 7.9) – 118 ^o (SD 33.3) to -1 ^o (SD 2.8) – 106 ^o (SD 39.7). Complications of fracture were successfully managed with internal fixation in 3 and extension of the frame in one patient(s). Osteomyelitis occurred in 3 patients, 2 of which were successfully managed with debridement and intravenous antibiotics. One patient was successfully treated with transfemoral amputation. All other femora are healed and free of infection.
please complete other side also	What are your conclusions? Reconstruction of the femur with external fixation is a valuable technique for deformity correction, lengthening, and repair of nonunions/ bone defects. External fixation is particularly useful for minimally invasive deformity correction, lengthening, bone transport, and management of complex and infected nonunions. Additional procedures may be needed to manage obstacles and complications.

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Abstract Application for LLRS Sixteenth Annual Scientific Meeting

July 21–23, 2006

Wyndham at Emerald Plaza - San Diego, CA

Instructions:

- 1. A complete mailing address is required for the first authors and all co-authors. Please provide an e-mail address is applicable.
- 2. The abstracts will be graded in "blind" fashion. The abstract text must not reveal the authors' institution of origin.
- 3. All co-authors must agree with the material being submitted.
- 4. If the paper is published before presentation, it cannot be accepted.
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- 12. LLRS reserves the right to withdraw a paper at any time.

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This material has been or will be presented/published before July 21, 2006?	yes	<u>no</u>
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Each author/co–author has reviewed this abstract submitted to the 2006 Annual LLRS Meeting and agrees with the material being presented.

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