Segmental Defects of Femur: 
Shortening & then Lengthening
Bone Transport

Masters of Disaster: Managing Osteomyelitis in the 21st Century Course
Baltimore, Maryland
August 25, 2016

S. Robert Rozbruch, MD
Chief, Limb Lengthening & Complex Reconstruction Service
HOSPITAL FOR SPECIAL SURGERY
Professor of Clinical Orthopedic Surgery

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Disclosures

• Smith and Nephew: consultant
• Stryker: consultant, royalties
• Nuvasive/ Ellipse: consultant
• Springer Publishing: book editor

• The FDA has approved the products/devices in my presentation for the uses described
8.5 cm segmental defect, osteomyelitis
VREF osteomyelitis
6 months

10 cm lengthening
Failed free fibula reconstruction of Osteosarcoma resection

LLD = 6 cm
Free fibula
Nonunion + deformity
LLD
Nonunion repair
Deformity correction
1 year
Acute shortening of 2.5 cm followed by gradual shortening of 3.5 cm
Staged insertion of antx coated IM nail after 6 weeks; use shoe lift for LLD
Fungus and bacterial osteomyelitis
LLD 2.5 cm, varus malunion
1. Proximal femur osteotomy with blade plate
2. Retrograde femur lengthening With internal nail
Neonatal hip sepsis

LLD = 43 mm

Painful unstable hip
Residual LLD of 25 mm
After THR

Difficult to predict exact lengthening
To be gained with THR
RETROGRADE INTERNAL LENGTHENING NAIL
21 cm bone defect
s/p infection
Cement over rod
Offered hip disarticulation or total femur prosthesis
Limb Lengthening and Reconstruction Surgery Case Atlas

Volume 1

1. Pediatric Deformity
2. Trauma
   Foot and Ankle
3. Adult Reconstruction
   Tumor
   Upper Extremity

3 Volumes
Thank You

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