4th Annual UCSF/IGOT Pediatric Limb Differences Webinar

Post Traumatic Limb Deformities in Children and Young Adults: A Global Perspective

Date- Friday June 13, 2025

6 am- 11.30 am PST

⇒ Target audience- Orthopedic surgeons and learners across the globe
⇒ 4 sessions- 75 mins each with 5-minute breaks after each session
⇒ Each session- 10 mins intro talk and 60 mins case presentation including discussion
⇒ Each case presentation for 4 mins each
⇒ Panel discussion at the end of each of the 4 sessions

Program

6 AM - Welcome & Introductions: Sanjeev Sabharwal (15 mins)

Setting the stage and Audience poll responses

1. Sequelae of Physeal injuries
    - Intro talk- Mark Eidelman (10 mins)
      An overview of post-traumatic injuries to the growth plate with case examples

CASE PRESNTATIONS: Each case presentation for 4 mins each, 1 minute transition

i. 6:25 AM - Radler: Physeal Bar resection
   Direct and Indirect techniques of physeal bar resection
ii. 6:30 AM - Gardner: Epiphyseolysis & guided growth
   Physeal bar resection combined with guided growth at the distal femur in a 3 yr. old
iii. 6:35 AM - Patwardhan: Osteotomy with Epiphyseolysis
   Physeal bar resection combined with an opening wedge osteotomy of the distal tibia in a 3 yr. old
iv. 6:40 AM - Izuagba: Physeal Injury-Staged reconstruction
   Staged reconstruction of 2- level post-traumatic tibial deformity with acute and gradual correction.
v. 6:45 AM - Hill: Deformity correction with IM lengthening nail
   Acute correction with fixator-assisted retrograde nailing and staged internal lengthening for a premature partial physeal arrest of the distal femur
vi. 6:50 AM - Iobst: Deformity correction with Extramedullary & IM lengthening nail
   Extramedullary lengthening with deformity correction of the distal femur in a 6 yr. old with staged retrograde internal lengthening closer to skeletal maturity.

6:55 AM - Panel Case Discussion with audience poll

Post traumatic physeal arrest of the distal femur in an adolescent with symptomatic patellar subluxation despite limb realignment and lengthening-Lessons Learned.

2. Malunions

- 7:25 AM - Intro talk: Christof Radler (10 mins)

An overview of post-traumatic malunion of the lower extremity in children and young adults with case examples

CASE PRESNTATIONS: Each case presentation for 4 mins each, 1 minute transition

i. 7:35 AM - Varghese: Deformity correction- Keeping it Simple
A severe post-traumatic distal tibial deformity with scarring treated with closing wedge supramalleolar osteotomy and k-wire fixation.

ii. 7:40 AM Nunn: Intra & Extra-articular osteotomy
Malunion of a distal femoral Hoffa fracture and physeal arrest treated with a staged fixator-assisted intra-articular osteotomy followed by an extra-articular realignment osteotomy

iii. 7:45 AM Iobst: Malunion post-lengthening
Malunion following femoral lengthening treated with 2-level femoral osteotomy followed by staged internal lengthening

iv. 7:50 AM Diallo: Delayed presentation
Malunion of a distal femoral fracture with delayed presentation treated with acute correction and shortening.

v. 7:55 AM Gardner: Malunion with fragile bone
Proximal femoral mal-non-union in an adolescent with osteogenesis imperfecta treated with staged deformity correction with plated fixation followed by antegrade nailing

vi. 8:00 AM Nelson: Fixator-assisted nailing with Lengthening-over-nail
Post-traumatic distal femoral deformity and shortening in an adolescent treated with fixator-assisted distal femoral corrective osteotomy and retrograde nailing combined with proximal lengthening over a nail

8:05 AM - Panel Case Discussion with audience poll

Post-traumatic malunion of a closed tibial shaft fracture in an adolescent treated initially with closed reduction and casting. Treatment options?

3. Non-unions and Bone Loss

- 8:35 AM - Intro talk: Scott Nelson (10 mins)

An overview of post-traumatic nonunion and bone loss in children and young adults with case examples

- 8:45 AM - “Pediatric blast injury in least-resourced conflict settings: sequelae of extremity injury”- Hannah Wild (10 mins)
  Individual and societal impact of blast injury to the extremities affecting children and youth related to conflicts in low-resource settings.

CASE PRESNTATIONS: Each case presentation for 4 mins each

i. 8:55 AM - Eidelman: Post-traumatic bone defect -Acute deformity with proximal lengthening

Acute management of an open grade 3 tibia shaft fracture in an 8 yr. old with fixator-assisted shortening and angulation and staged lengthening of the proximal tibia

ii. 9:00 AM - Aroojis: Non-union in an infant
Non-union of a femoral shaft fracture in an infant following spica cast treatment managed with plate fixation

iii. 9:05 AM Flannagan: Non-union in Osteogenesis Imperfecta
Treatment strategy for managing non-union of the tibia in children with Osteogenesis Imperfecta

iv. 9:10 AM - Radler: Aseptic non-union treated with lengthening nail
Post-traumatic aseptic femoral shaft non-union in an adolescent treated with gradual distraction using a motorized lengthening nail

v. 9:15 AM - Nunn: Bone loss treated with fibular transfer and external fixator
Post-traumatic infected tibial non-union with bone loss in a 9 yr. old treated with fibular transfer and compression using external fixation

vi. 9:20 AM - Banskota: Gap non-union treated with Huntington procedure and external fixator
Post-septic gap non-union of the tibia in a 6 yr. old treated with staged tibio-fibular synostosis and gradual lengthening of the fibula.

vii. 9:25 AM - Mare: Masquelet and External Fixation
Post-septic gap non-union of the tibia shaft in a 9 yr. old treated with modified induced membrane technique and external fixation.

viii. 9:30 AM - Morshed: Masquelet and Internal Fixation

Infected bone defect of the tibial shaft in a young adult treated with induced membrane technique and intra-medullary fixation

9:35 AM - Panel Case Discussion with audience poll

Reconstruction options for a 9 yr. old with a significant tibial bone gap following debridement of an infected non-union.

4. <u>Jugaad- Innovative Techniques and Frugal Innovations</u>

- 10:05 AM - Intro talk: Sandeep Patwardhan (10 mins)

  Innovative techniques and frugal innovations for managing lower limb deformities in resource-limited environments

CASE PRESENTATIONS: Each case presentation for 4 mins each

i. 10:15 AM - Nelson: Jack-knife technique for femoral non-malunion
   Video demonstration of the “jack-knife” technique for managing femoral shaft malunion with translation and shortening
ii. 10:20 AM - Naik: Tibial nail for comminuted femur fx
   Using a standard tibial locking nail for managing comminuted femoral shaft fractures in adolescents
iii. 10:25 AM - Galban: Customized femoral plate post-sepsis
   Reconstruction of the femur with a modified pelvic support osteotomy and customized implants in a young child following perinatal sepsis of the hip and knee
iv. 10:30 AM Moghrabi: Anterolateral thigh flap in active conflict zone

Using a anterolateral thigh flap and external fixation to cover a large proximal thigh and pelvic defect in a 9 yr. old victim of a blast injury in. an active conflict zone

v. 10:35 AM - Shah: Posterolateral approach for tibial reconstruction
Gap non-union of the distal tibia in an adolescent with prior anterior soft tissue flap and scarring treated with osteotomy via a posterolateral approach followed by staged lengthening of the proximal tibia.

vi. 10:40 AM - Salaam: Bone transport over k-wire
Post-traumatic gap non-union of the tibia in a 4 yr. old treated with bone transport using a monoliteral external fixator over a k-wire

vii. 10:45 AM - Wijaysinghe: Ipsilateral ulnar transfer for distal radius bone loss
Post-traumatic distal radius metaphyseal non-union treated with ipsilateral ulnar transfer

viii. 10:50 AM - Agashe: How to get a post-op “true” lateral elbow x-ray
A modified patient positioning technique to obtain a true lateral view x-ray of the elbow

10:55 AM - Panel Discussion with audience poll

Preferred means of training and teaching limb deformity in resource-limited environments

11:15 AM - Concluding Remarks: Sanjeev Sabharwal (15 mins)

Registration Link:

https://ucsf.zoom.us/webinar/register/WN_PQhKXoTaRjeaURfGLOqVoQ.