VALGUS ANKLE

- Must consider the entire lower extremity alignment/stability
- Potential sources of ankle valgus other than isolated PTT dysfunction
  - Degenerative
    - Deltoid ligament insufficiency
    - Knee valgus
  - Traumatic
    - Tibial/Fibular Malunion
    - Global ankle instability
  - Developmental
    - Valgus TAS
  - Congenital
    - Fibular hypoplasia

PRINCIPLES OF LOWER EXTREMITY DEFORMITY EVALUATION

- Normal limb alignment
  - Mechanical axis
  - LDTA
  - ADTA
  - TAS
  - Talocrural angle
- Etiology of deformity
  - Bone mal-alignment
  - Intra-articular wear
  - Ligamentous laxity
- Components of deformity
  - Length
  - Angulation
  - Rotation
  - Translation
- Radiographic evaluation
  - Foot / ankle series (Tib/fib relationship)
  - Long leg alignment views
  - HLA view
  - Components of deformity analysis
    - Define CORA / apex
    - Assess: translation, rotation, length
    - Compensatory deformities
- Other variables
  - Soft tissue status
  - Bone quality at proposed osteotomy site
  - Neurovascular
    - Structures at risk with acute correction
SURGICAL PRINCIPLES - TIBIAL OSTEOTOMY

- Must address ligamentous instability, bone mal-alignment and restore normal tib/fib relationship

- Acute versus gradual correction
  - Advantages / disadvantages

- Tibial shaft deformity
  - Associated foot / ankle conditions
  - Osteotomy principles
    - Single plane / Biplanar
    - Gradual correction

- Supramalleolar
  - Intra-articular vs extra-articular deformity
  - Ligamentous component
  - Surgical alternatives
    - Dome versus Wedge
      - Osteotomy techniques
      - Fixation alternatives
    - Gradual correction
      - Osteotomy techniques
        - Multiple drill hole
        - Gigli saw
      - Ankle distraction

- Correction of compensatory deformity

SURGICAL PRINCIPLES - DELTOID LIGAMENT RECONSTRUCTION

REFERENCES


