COMPLICATIONS ASSOCIATED WITH EPIPHYSIODESIS FOR MANAGEMENT OF LEG LENGTH INEQUALITY

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Disclosures

- Listed in program
- None relevant to this talk
Purpose

To evaluate the nature, frequency, and potential risk factors for complications associated with epiphysiodesis performed to manage limb length discrepancy in the lower extremity.
Methods

- IRB approved, retrospective chart and radiograph review
- Inclusion criteria:
  - Lower extremity epiphysiodesis for leg length inequality
  - “Traditional Phemister”, Open Curettage; “Percutaneous”
- 1980-2008
- 755 patients
Results

- 41/755 (5.4%) developed complications.
- 2 /755 (0.26%) peri-operative complications
  - larynospasm
  - allergic rash to antibiotics
- 6/755 (0.8%) had neurologic symptoms
  - persistent dysesthesia or numbness
  - peroneal nerve palsy
- All eventually resolved.
Results

- 6/755 (0.8%) developed overcorrection of the limb length inequality, and required “short-leg” epiphysiodesis.
- 27/755 (3.6%) were documented with angular deformity or persistent growth
Results

• 27 Persistent growth:
  • 15 had re-exploration of epiphysiodesis site
  • 4 underwent corrective osteotomy
  • 6 had deformity recognized but treatment was not pursued
  • 2 the deformity was evident on postoperative radiographs but not noted in the medical record.
Risk Factors for Persistent Growth

Etiology of Limb Length Discrepancy

- CFD = 4
- CT Bowing = 3
- Fib hem = 6
- Tib hem = 1

- Trauma = 4
- DDH, Perthis, CoxaV = 4
- Klippel-T = 2
- Neurofibromatosis = 2
- Hemihypertrophy = 1

Complications

Congenital (14/140 pts)
- Re-exploration: 7
- Corrective osteotomy: 1
- Def recognized / untreated: 5
- Def recognized / unnoted: 1

Aquired (13/609 pts)
- Re-exploration: 7
- Corrective osteotomy: 3
- Def recognized / untreated: 2
- Def recognized / unnoted: 1
Risk Factors for Persistent Growth

Extent of Limb Length Discrepancy

Complication (n=27) vs. No Complication (n=728)

LLD value (cm)

- Complication: 5.40
- No Complication: 3.70

* P=0.01
Risk Factors for Persistent Growth

Patient age

Complication (n=27) No Complication (n=728)

P=0.016
Conclusions

• 5% of patients having epiphysiodesis for limb length inequality will develop complications

• Complications are more likely in younger patients with larger and congenital deformity
Thank You