Preliminary results of stretching cast treatment without Achilles tenotomy in infantile clubfeet

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Disclosure

- We have no potential conflicts with this presentation.
Ponseti treatment of Clubfeet

- Ponseti serial cast treatment is very popular.
- Equinus is corrected last after complete correction of cavus and adductus.
- Percutaneous Achilles tenotomy is required in majority of the feet.
- Splinting for 2-4 years
Study group

- 72 feet in 47 infants.
- 39 boys and 18 girls
- Equinus and cavus were corrected with the first cast.
- All deformities were corrected simultaneously with the second cast onwards.
- Dennis Browne shoes and home stretching for 2 years.
Equinus correction

- The foot was locked in supination with the first cast while applying dorsiflexion force at the ankle initially.
- Dorsiflexion force was applied to the Calcaneo-cuboid joint area with later casts to prevent development of rocker bottom deformity.
Cavus and equinus correction
Simultaneous correction of all deformities – Peritalar reduction
Results

- Severity
  - Mild 12
  - Moderate 42
  - Stiff 18

- Complete correction (Abduction 50°, Dorsiflexion 20°) in 4.9 casts (3-6).

- Average follow-up was 17 months (13-27).
Recurrence

- Equinus with or without adductus in 28 feet (36%).
  - 13 feet responded to home stretching alone.
  - 15 feet were treated with repeat casting.

- Surgery in one patient on both feet (3%) for a second recurrence.
Discussion

- Correction of equinus early in the casting allowed for complete correction without the need for Percutaneous tenotomy in any of our patients.
- 36% recurrence rate was high, but simple stretching or repeat casting were successful.
- The parents of the only patient who needed surgery did not stretch or splint the foot.
Conclusion

- Early correction of equinus was safe and effective during cast treatment of clubfeet.
1. Halanski MA¹, Davison JE, Huang JC, Walker CG, Walsh SJ, Crawford HA. 