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Historical Review of the Study for Congenital Clubfoot in Japan

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1) Etiology

1) Ishihara M. Genetic factor of the congenital club foot. J Jpn Orthop Assoc 1940;15:731-744
2) Yamamoto H. A clinical, genetic and epidemidogic study of congenital club foot. Jpn J Human Genet 1979;24:37- 44

2) Pathology

1) Shimazu A. Pathological finding of congenital club foot in autopsy study. Seikeigeka 1973;24:803-810

Fig. 1A : The talsal neck and head were deviated medially, and the tarsal head showed special-shaped deformity. Talus encountered with anteromedial part of the navicular and calcaneus.
1B : After excision of talus.

2) Iizaka H. Eperimental study of congenital club foot. J Jpn Orthop Assoc 1977;51:381-400

Fig. 2A

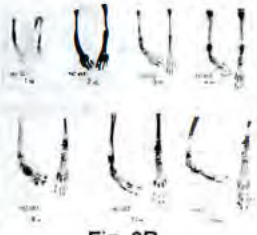


Fig. 2B

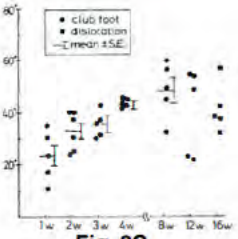


Fig. 2C

Fig. 2A : Dynamic adduction, 2B : A-P radiograph of the foot shows gradual increase of the adduction deformity in the forefoot. 2C : Time course of the deformity in the forefoot. "Dislocation" means the mice with hip or patella dislocation after operation.

3) Radiographical Study

1) Kameshita K. Arthrography of the midtarsal joints in congenital club foot. J Jpn Orthop Assoc 1975;49:59-70

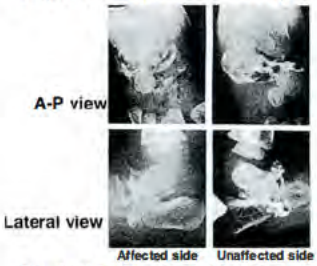
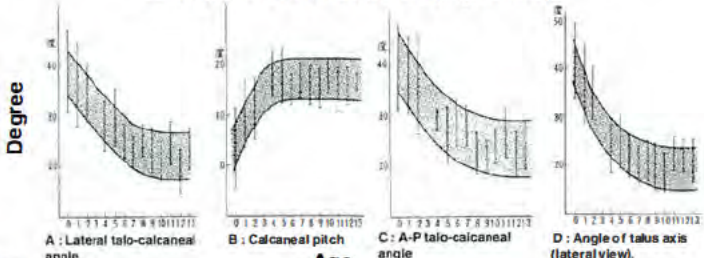


Fig. 3 : 2Y 1 M male , Right congenital clubfoot

2) Miyoshi K. Radiographical study of the changes of talo-calcaneal aligemant during the growth. Seikeigeka 1970;21:427-434 (Fig. 4A - D)



3) Nomura S. Internal rotation of the curus in congenital clubfoot. Rinsho Seikei Geka 1974;9:725-737

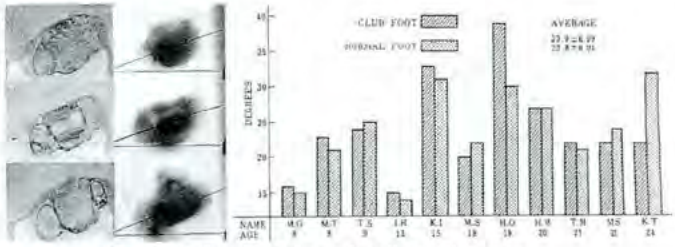


Fig. 5 : Lateral torsion of unilateral cases.

4) Treatment

A) Conservative treatment

1) Morita S. A method for the treatment of resistant congenital club foot in infants by gradual correction and wire-fraction cast.
J Bone and Joint Surg 1962;44-A:149-160

Fig. 6A ,B :
Drawings showing the arrangement of the leverage-wire apparatus and the manipulative maneuvers (arrows).

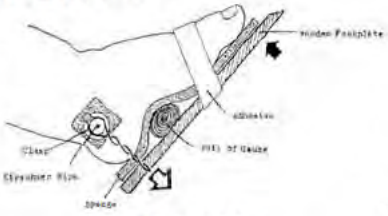


Fig. 6A : Medial view

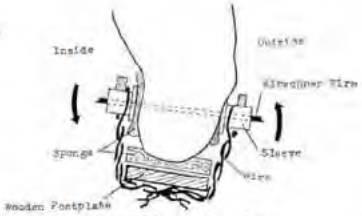


Fig. 6B : Posterior view

2) Shinoda T. Functional treatment of the congenital club foot.
Seikeigeka 1970;21:15-21

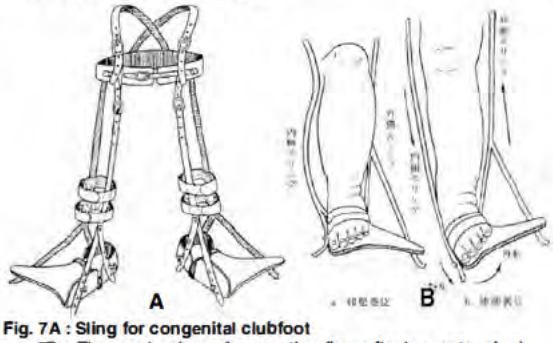


Fig. 7A : Sling for congenital clubfoot
7B : The mechanism of correction (knee flexion, extension)

3) Yamamoto H. Treatment of congenital clubfoot with a modified Denis Browne splint.
J Bone and Joint Surg 1990;72-B:460-463

Fig. 8: Modified Denis Browne splint

B) Surgical treatmant

1) Yoshikawa S. Medial release operation for congenital clubfoot.
Guideline of Orthopaedic Treatment 422,1963
Igaku Shoin,Tokyo

Fig. 9A-F : Our original medial release
A : Skin incision, B : Elongation of the posterior tibial tendon,
C : Release of the talo-navicular joint, D : Release of the talo-calcaneal joint,
E : Lateral shift of the navicular bone, F : Elongation of Achilles tendon and release of the posterior capsule of talocrural joint should be added if posterior release would be necessary.

2) Kato T. Tarsal neck osteotomy for congenital clubfoot.
Operation 1979;33:503-504

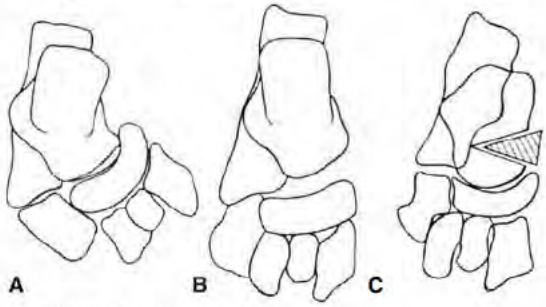


Fig. 10A-C: Alignment of tarsal bones
A : Pre-operation, B : Post-operative alignment after posteromedial release,
C : After wedge osteotomy of talus neck