



Treatment Outcome of Posteromedial Procedure for Neglected Clubfoot in Children Older than 2 Years of Age - Report of 3 Cases

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ABSTRACT

Background: A neglected clubfoot is a clubfoot that didn't get early or adequate treatment; it is a significant problem in developing countries. The posteromedial soft tissue release procedure is one of the surgical techniques in clubfoot treatment. **Case:** Three patients with neglected clubfoot were assessed before and after treatment. All patients were treated with posteromedial soft tissue release method followed by serial application of above-knee plaster of parts for three months. **Result:** Two cases had a good correction, one case had a fair correction. **Conclusion:** The posteromedial soft tissue release with proper follow up and splinting results in a cosmetically normal appearance and functionally acceptable pain-free foot in neglected clubfoot in children older than two years of age.

Keywords: Neglected clubfoot, Posteromedial soft tissue release

ABSTRAK

Latar Belakang: *Neglected clubfoot* merupakan *clubfoot* yang tidak ditatalaksana atau mendapat tata laksana awal tidak adekuat; kondisi ini sering ditemui di negara berkembang. Prosedur *posteromedial soft tissue release* merupakan salah satu teknik operasi dalam tata laksana *clubfoot*. **Kasus:** Tiga pasien *neglected clubfoot* ditatalaksana dengan prosedur *posteromedial soft tissue release* diikuti aplikasi serial *plaster of paris* di atas lutut selama tiga bulan. Hasil: Dua kasus menunjukkan hasil koreksi baik dan 1 kasus hasil koreksi sedang. **Simpulan:** Prosedur *posteromedial soft tissue release* dikombinasi dengan *follow up* serta teknik *splinting* yang adekuat memberikan hasil kosmetik yang baik serta kaki bebas nyeri pada kasus *neglected clubfoot* anak berusia di atas dua tahun.

Kata kunci: *Neglected clubfoot*, *posteromedial soft tissue release*

BACKGROUND

Congenital equinovarus (CTEV) or clubfoot is the most typical congenital anomaly presented to a pediatric orthopedic surgeon and is the most typical genetic condition resulting in locomotor disability.¹ Clubfoot is a complex foot deformity that requires dedicated efforts from both the parents and the surgeon.²

The anomaly occurs in the 3rd month of intrauterine life and is characterized by dysfunction of the posterior and medial aspects of the lower leg, ankle, and foot. The muscles are smaller, and there is increased collagen synthesis resulting in fibrosis of the posteromedial tarsal ligaments, deep fascia, Achilles tendon, and tibialis posterior tendon.³ Treatment is ideally commenced as early as possible and closely monitored.^{2,4}

Untreated CTEV beyond early childhood is rarely seen in developed countries, 5-7

but is a common occurrence in developing nations.^{8,9} There are several reasons for its high prevalence in the third world. The delayed presentation may be due to a failure of detection in the first two years of life.^{10,11} Shortage of materials during management and ethnocultural beliefs are other factors.¹⁰ Patients are often from rural areas and present late to hospitals due to traveling distance.^{11,12}



Figure 1. Three cases of neglected unilateral (R) clubfoot



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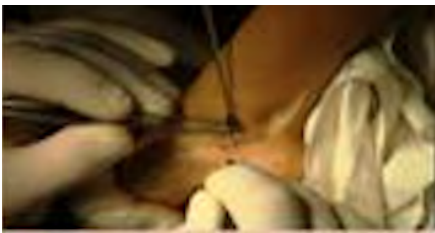


Figure 2. Posteromedial incision extending to the naviculo-cuneiform joint



Figure 3. Lengthening the Achilles tendon



Figure 4. Differentiate and dissect the flexor hallucis longus, tibialis posterior, and flexor digitorum longus tendon anteriorly



Figure 5. Open the tibiotalar, subtalar, and talonavicular joint. Release the capsule



Figure 6. Reduction of the foot



Figure 7. Tendon suturing



Figure 8. Wound closure



Figure 9. One year after surgery (Patient 1)



Figure 10. One year after surgery (Patient 2)



Figure 11. One year after surgery (Patient 3)

In this setting, the patient's disability may worsen the entire family's poverty because the mother has less time to look after siblings and has less time for economic or domestic activities.¹³ There are also psychological issues that should be addressed before management.⁹ This includes a comprehensive discussion with the patient and family on the treatment and the expected results as both parents and the patient is prone to psychological trauma.⁸

This article reports the posteromedial soft tissue release as a treatment for neglected clubfoot in patients older than two years of age.

CASE

Three patients with neglected clubfoot for two years, six years, and eight years respectively, were presented. All patients were then treated with posteromedial soft tissue release procedure followed by serial application of above-knee plaster of parts for three months. The assessment was done using the Pirani scoring system before and after treatment.

RESULTS

Two cases had good correction, one case had fair correction.

CONCLUSION

In the treatment for neglected clubfoot cases in children older than two years, the posteromedial soft tissue release with proper follow-up and splinting give a cosmetically normal appearance and functionally acceptable pain-free foot.

Table. Pirani scoring system assessment before and after treatment

	CASE I		CASE II		CASE III	
	Before	After	Before	After	Before	After
A. Curve Lateral Border	1	0.5	1	0.5	1	0.5
B. Medial Crease	0.5	0	1	0	1	0
C. Talar Head	0.5	0	1	0	1	0
Midfoot Score	2	0.5	3	0.5	3	0.5
D. Post Crease	0.5	0	1	0	1	0
E. Equinus Rigidity	0.5	0	1	0.5	1	0.5
F. Empty Heel	0	0	1	0	1	0
Hind Foot Score	1	0	3	0.5	3	0.5
Total Score	3	0.5	6	1	6	1



LAPORAN KASUS



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