**Jurnal Abdi Kesehatan dan Kedokteran (JAKK)**
p-ISSN: 2962-8245 | e-ISSN: 2962-7133
Vol. 5, No. 1, Januari 2026

***Original Article***

# Efektivitas Posteromedial Release yang Dikombinasikan dengan Subtalar Release pada Congenital Talipes Equinovarus: Suatu Tinjauan Sistematis

## *The Effectiveness of Posteromedial Release by Subtalar Release for Congenital Talipes Equinus Varus (CTEV): A Systematic Review*

I Putu Lari Sandy[1*], Made Agus Maharjana[2]

[1] *Resident of Orthopaedic and Traumatology Faculty of Medicine, Udayana University, Prof Ngoerah General Hospital, Bali, Indonesia*
[2] *Department of Orthopaedic and Traumatology, Faculty of Medicine, Udayana University, Prof Ngoerah General Hospital, Bali, Indonesia*

** **Corresponding Email**: putularisandy@gmail.com*

***ABSTRACT***

*Clubfoot, or congenital talipes equinovarus (CTEV), strikes about 1–2 in 1,000 newborns, featuring forefoot adduction, hindfoot varus, equinus, and cavus deformities that, if untreated, cause lasting disability. While the Ponseti method remains the gold standard, tough resistant cases call for surgery like posteromedial release (PMR) or complete subtalar release (CSTR) yet no clear winner emerges for long-term results or recurrence rates. This study compares their outcomes using recent evidence.*

*This PRISMA-guided systematic review compared PMR and CSTR for CTEV treatment, analyzing peer-reviewed clinical studies from 2005–2025 on recurrence, complications, functional outcomes, and operative parameters; four studies met inclusion criteria. The search across PubMed, Google Scholar, and ScienceDirect used Boolean operators—("CTEV" OR "Congenital talipes equinus varus") AND ("Posteromedial release" OR "modified posteromedial release") AND ("Complete subtalar release" OR "modified complete subtalar release") including full-text English clinical reports/series on resistant clubfoot while excluding reviews, abstracts, non-English/out-of-timeframe works, duplicates, animal studies, and similar materials. PROSPERO (Registration ID: CRD420251159365).*

*The four studies (short- and long-term follow-up) showed both PMR and CSTR effectively correct CTEV, with no significant differences in clinical outcomes, recurrence rates, radiological improvements, or functional results. Patient age, postoperative care, and rehabilitation influenced long-term outcomes. Complications included CSTR overcorrection and PMR scar issues, emphasizing careful surgical planning.*

*This review suggests that both PMR and CSTR are effective treatments for resistant clubfoot, with no clear advantage of one over the other. Future studies should focus on larger sample sizes, standardized outcome measures, and longer follow-up to determine the most effective surgical approach for CTEV.*

***Keywords:*** *Congenital Talipes Equinovarus, Clubfoot, Posteromedial Release, Complete Subtalar Release*

**ABSTRAK**

Kaki pengkor (clubfoot), atau congenital talipes equinovarus (CTEV), terjadi pada sekitar 1–2 dari 1.000 bayi baru lahir, dengan ciri aduksi kaki depan, varus kaki belakang, equinus, dan deformitas kavus yang bila tidak ditangani dapat menyebabkan disabilitas menetap. Meskipun metode Ponseti tetap menjadi standar emas, kasus-kasus resisten yang sulit sering memerlukan pembedahan seperti posteromedial

release (PMR) atau complete subtalar release (CSTR); namun belum ada pemenang yang jelas terkait hasil jangka panjang maupun angka kekambuhan. Studi ini membandingkan luaran keduanya menggunakan bukti terkini.

Tinjauan sistematis berpanduan PRISMA ini membandingkan PMR dan CSTR untuk penatalaksanaan CTEV, dengan menganalisis studi klinis yang telah ditelaah sejawat (peer-reviewed) dari tahun 2005–2025 terkait kekambuhan, komplikasi, luaran fungsional, serta parameter operatif; empat studi memenuhi kriteria inklusi. Pencarian pada PubMed, Google Scholar, dan ScienceDirect menggunakan operator Boolean—("CTEV" OR "Congenital talipes equinus varus") AND ("Posteromedial release" OR "modified posteromedial release") AND ("Complete subtalar release" OR "modified complete subtalar release")—dengan memasukkan laporan/seri klinis berbahasa Inggris yang tersedia full-text tentang clubfoot resisten, serta mengecualikan artikel tinjauan, abstrak, karya non-Inggris/di luar rentang waktu, duplikasi, studi hewan, dan materi sejenis. PROSPERO (Registration ID: CRD420251159365).

Keempat studi (dengan tindak lanjut jangka pendek dan jangka panjang) menunjukkan bahwa PMR dan CSTR sama-sama efektif mengoreksi CTEV, tanpa perbedaan bermakna pada luaran klinis, angka kekambuhan, perbaikan radiologis, maupun hasil fungsional. Usia pasien, perawatan pascaoperasi, dan rehabilitasi memengaruhi luaran jangka panjang. Komplikasi yang dilaporkan mencakup overkoreksi pada CSTR dan masalah jaringan parut pada PMR, sehingga menegaskan pentingnya perencanaan operasi yang cermat.

Tinjauan ini menyimpulkan bahwa PMR dan CSTR merupakan terapi yang efektif untuk clubfoot resisten, tanpa keunggulan yang jelas dari salah satu teknik dibanding yang lain. Penelitian selanjutnya perlu berfokus pada ukuran sampel yang lebih besar, ukuran luaran yang terstandarisasi, dan tindak lanjut yang lebih lama untuk menentukan pendekatan bedah yang paling efektif bagi CTEV

**Kata Kunci:** Congenital Talipes Equinovarus, Clubfoot, Posteromedial Release, Complete Subtalar Release

***Submit*:** September 21, 2025| ***Accepted***: January 29, 2026| ***Online***: January 31, 2026
***Citation***: Sandy, I. P. L., & Maharjana, M. A. (2026). Efektivitas Posteromedial Release yang Dikombinasikan dengan Subtalar Release pada Congenital Talipes Equinovarus: Suatu Tinjauan Sistematis: The Effectiveness of Posteromedial Release by Subtalar Release for Congenital Talipes Equinus Varus (CTEV): A Systematic Review. Jurnal Abdi Kesehatan Dan Kedokteran, 5(1), 526–536.
https://doi.org/10.55018/jakk.v5i1.172

**Key Findings**

- ⇒ Posteromedial release and complete subtalar release are both effective in correcting resistant congenital talipes equinovarus, with no clear differences in clinical or functional outcomes.
- ⇒ Neither surgical technique demonstrates a consistent advantage over the other in terms of recurrence or radiological improvement across follow-up periods.
- ⇒ Long-term outcomes appear to be influenced more by patient-related and postoperative management factors than by the choice of surgical technique itself..

## Introduction

Congenital talipes equinovarus (CTEV), commonly known as clubfoot, is a prevalent congenital deformity affecting 1-2 in 1,000 live births. Characterized by forefoot adduction, hindfoot varus, ankle equinus, and cavus deformity, untreated CTEV can lead to long-term disability. The Ponseti method is considered the gold standard for treatment, but neglected or resistant cases often require surgical interventions. Common surgical approaches include posteromedial release (PMR) and complete subtalar release (CSTR), which aim to correct these complex deformities. However,

there is a lack of consensus on the most effective method, particularly regarding long-term outcomes and recurrence (Mahapatra, S., 2016).

The primary goal of treatment in CTEV is to achieve a pain-free, plantigrade, and functional foot with minimal surgical intervention. While the Ponseti method has become the gold standard for early management, cases that are neglected, resistant, or relapsed often require surgical intervention. Among the surgical techniques commonly utilized are posteromedial soft tissue release (PMSTR), modified posteromedial release (PMR), and complete subtalar release (CSTR). These procedures aim to correct the complex deformities of CTEV through release of contracted soft tissues and realignment of bony structures (Kaewpornsawan, K., 2007).

Several clinical investigations have explored the effectiveness of different surgical techniques for managing idiopathic clubfoot. In general, both posteromedial release and complete subtalar release have been reported to provide satisfactory deformity correction and functional outcomes. Most studies indicate that these approaches show comparable results in terms of clinical improvement, with no consistent evidence favoring one method over the other (Gupta, S., 2014).

This study aims to compare the outcome between PMR and CSTR for treating CTEV based on recent study. These findings, consensus remains limited regarding the optimal surgical approach, particularly in terms of long-term functional outcomes, complication rates, and recurrence. Therefore, systematic synthesis of available evidence is necessary to better inform clinical decision-making and guide future practice in the surgical management of idiopathic clubfoot (Nimityongskul, P., 2002) .

## Methods

### Search Strategy

Three databases were used for the bibliographical search by searching PubMed, Google Scholar, and ScienceDirect for comparative studies between PMR and CSTR in the treatment of CTEV. Boolean operators have been employed to define the search as follows: (“CTEV” OR “Congenital talipes equinus varus ”) AND (“Posteromedial release ” OR ”modified posteromedial release ") AND (“Complete subtalar release” OR ”modified complete subtalar release").

Study Selection and Data Collection

Full-text publications and clinical case reports or case series that were published in English throughout the last twenty years (1 January 2005 to 31 December 2025) were included in the review. This study's primary goals were to comparing Posteromedial Release (PMR) and Complete Subtalar Release (CSTR) for the treatment of resistant congenital clubfoot (CTEV). The inclusion and exclusion criteria were used to choose the relevant papers. Exclusion criteria for this study include: Review articles, letters, conference abstracts, technical notes, or animal studies; Articles not published in English, publications published outside of the selected time frame; and bibliographic materials such as reviews, systematic reviews, posters, conferences, book

sections, and perspectives. Studies that were found to be duplicates in the search results were excluded. The selection of publication consider to the PRISMA statement (Preferred Reporting Items for Systematic Reviews and Meta analyses).

**PICO Criteria**

Population: Patients diagnosed with CTEV requiring surgical procedure
Intervention: Posteromedial release
Comparison: Subtalar release
Outcome: Studies comparing groups with control groups

**Data Extraction**

To verify for duplicate results across the three databases, the chosen citations and their titles were imported into Microsoft Office Excel. Records that were duplicates were removed.

**Data Analysis**

All identified titles and abstracts were screened for eligibility. Full-text versions of potentially relevant studies were retrieved for detailed assessment. In cases where multiple publications reported data from the same study cohort, only the most recent or most comprehensive version was included to avoid data duplication. The study protocol has also been prospectively registered with PROSPERO (Registration ID: CRD420251159365).

## Results

An initial search across three major databases; Google Scholar (n = 7), PubMed (n = 80), and the ScienceDirect (n = 8) yielded a total of 95 records. After removing 70 duplicate entries, 25 articles proceeded to the screening phase (**Figure 1**).

During the screening of titles and abstracts, 18 studies were excluded due to incompatibility with the target population or intervention. This left 7 full-text articles for detailed review. However, 3 of these were excluded because they lack of study methods or did not report outcomes relevant to the objective of the review. Consequently, 4 out of the 95 documents published between 2020 and 2025 that were retrieved for screening satisfied all eligibility requirements. Shown in Figure 1 and Figure 2.

This selection process reflects a focused and methodical approach to ensure only high -quality, relevant studies comparing with or without fat pad reconstruction of anterior cruciate were analyze.

The preoperative and postoperative radiological evaluations for both groups show notable improvements in angular measurements following surgery. In Group I, the preoperative angles were as follows: Talo-calcaneal angle (AP) 16.14° ± 8, Talo-calcaneal angle (Lat) 14.66° ± 8.25, Talo-1st metatarsal angle 49.53° ± 16.25, and Calcaneo-1st metatarsal angle 119.7° ± 18.54. Postoperatively, these values improved to: Talo-calcaneal angle (AP) 28.5° ± 6.5, Talo-calcaneal angle (Lat) 22.85° ± 5.25, Talo-1st metatarsal angle 7.25° ± 6.00, and Calcaneo-1st metatarsal angle 138.05° ± 12.25. In Group II, preoperative measurements were: Talo-calcaneal angle (AP) 16.2° ± 7.95, Talo-calcaneal angle (Lat) 15.23° ± 8.15, Talo-1st metatarsal angle 49.36° ± 16.75, and Calcaneo-1st metatarsal angle 118.95° ± 19, with postoperative measurements showing improvements

to: Talo-calcaneal angle (AP) 26.55° ± 8.5, Talo-calcaneal angle (Lat) 23.85° ± 7.25, Talo-1st metatarsal angle 6.25° ± 4.70, and Calcaneo-1st metatarsal angle 139.05° ± 10.25. These changes highlight significant improvements in foot alignment post-surgery across both groups.

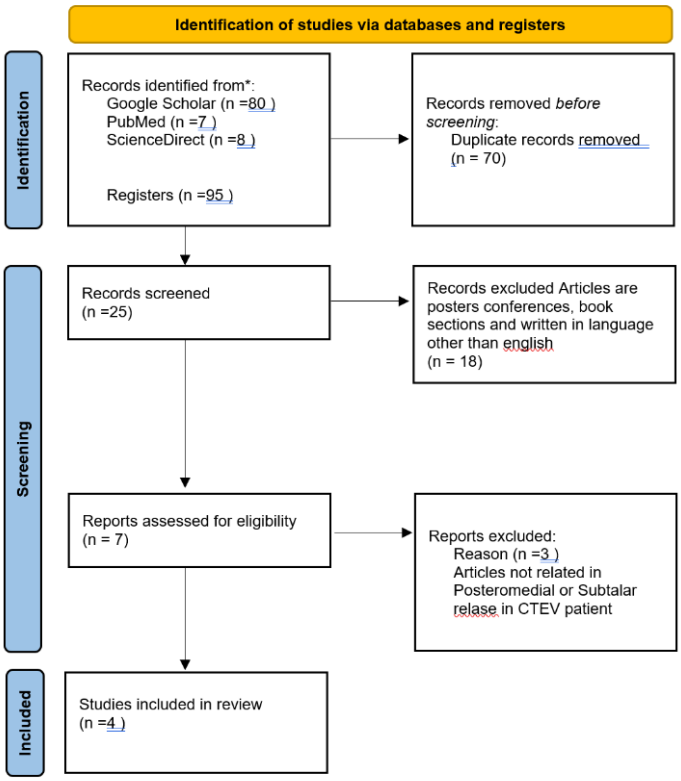


**Figure 1**. PRISMA flowchart lustrating the search and selection of the articles

**Table 1.** Characteristics of study

| No. | Reference | Type of Study | Sample Size | Outcome | Follow Up Duration |
|---|---|---|---|---|---|
| 1. | Mahapatra, S and Abraham, V, 2016 | A randomized prospective interventional study | 35 patients (divided by 20 boys and 15 girls; with 60 disease feet) | FLACC behavioral pain scale there was no substantial difference in the postoperative angles in both groups | 3 months |
| 2. | Kaewpornsawan et al., 2007 | A randomized controlled trial | 86 patients (divided by 48 | The Dimeglio preoperative assessment | 15.1 - 23.7 months |

| No. | Reference | Type of Study | Sample Size | Outcome | Follow Up Duration |
|---|---|---|---|---|---|
| | | | boys and 38 girls; with 59 disease feet) | | |
| 3. | Gupta, S et al., 2014 | Prospective study | 27 patients (divided by 20 boys and 7 girls; with 44 disease feet) | Magone's scoring system (including clinical, radiographic, and functional parameters to assess surgical outcomes) | 64 months |
| 4. | Barik S, et al ., 2021 | Retrospective observational study | 21 patients (divided by 16 boys and 7 girls; with 32 disease feet) | The scar and functional score of Laaveg and Ponseti | 23 months |

**Table 2.** Outcome characteristic

| No | Reference | Outcome |
|---|---|---|
| 1. | Mahapatra, S and Abraham, V, 2016 | Both STR and PMR is an acceptable surgical method for treating neglected idiopathic clubfeet, also better deformity correction as seen by pirani scores. |
| 2. | Kaewpornsawan et al., 2007 | There were no statistically significant differences of both groups between age, sex, side, bilaterality, and Dimeglio pre-operative evaluation. |
| 3. | Gupta, S et al., 2014 | No differences were noted between these two surgical techniques. |
| 4. | Barik S, et al ., 2021 | There was no significant association between post-operative radiographic angles and pre-operative radiographic angles. |

**Table 3** Characteristics of Technique

| No. | Reference | Average of Age | Technique Operation |
|---|---|---|---|
| 1. | Mahapatra, S and Abraham, V, 2016 | 18.75 months old (1-3 years) | Posteromedial Soft Tissue Release (PMSTR) |
| 2. | Kaewpornsawan et al., 2007 | 5.9 months old (3-12 months) | Group A: modified posteromedial release<br>Group B: modified complete subtalar release |
| 3. | Gupta, S et al., 2014 | 14.20 months old (11-20 months) | Complete subtalar release (CSTR) or posteromedial release (PMR) |
| 4. | Barik S, et al ., 2021 | 43.7 months old (24-26 months) | *ala carte* Posteromedial Soft Tissue Release |

**Table 4.** Characteristics of result

| Measurement | Group I (Postmedial Release) | Group II (Subtalar Release) |
|---|---|---|
| Talo-calcaneal angle (AP) | Pre-op: 16.14° ± 8<br>Post-op: 28.5° ± 6.5 | Pre-op: 16.2° ± 7.95<br>Post-op: 26.55° ± 8.5 |
| Talo-calcaneal angle (Lat) | Pre-op: 14.66° ± 8.25<br>Post-op: 22.85° ± 5.25 | Pre-op: 15.23° ± 8.15<br>Post-op: 23.85° ± 7.25 |
| Talo-1st metatarsal angle | Pre-op: 49.53° ± 16.25<br>Post-op: 7.25° ± 6.00 | Pre-op: 49.36° ± 16.75<br>Post-op: 6.25° ± 4.70 |
| Calcaneo-1st metatarsal angle | Pre-op: 119.7° ± 18.54<br>Post-op: 138.05° ± 12.25 | Pre-op: 118.95° ± 19<br>Post-op: 139.05° ± 10.25 |

## Discussion

The findings from this systematic review provide an insightful comparison

of two widely utilized surgical techniques for the treatment of congenital talipes equinovarus (CTEV): Modified Posteromedial Release (PMR) and Complete Subtalar Release (CSTR). Both surgical approaches demonstrated effective correction of the deformities associated with CTEV, with no significant differences in terms of recurrence rates, functional outcomes, or complication rates between the two. These findings align with previous studies that suggest both techniques are viable options for managing resistant or recurrent CTEV. However, while both approaches are effective, the choice of surgical intervention is highly dependent on patient-specific factors, such as age, deformity severity, and the presence of any complications or recurrence of the condition.

Both PMR and CSTR aim to release the contracted soft tissues of the foot, realign the bony structures, and correct the deformity. Despite their similarities, the subtle differences in surgical approach and technique may impact the postoperative recovery process. In particular, PMR is often associated with a higher likelihood of scar tissue formation, which could result in limitations in range of motion (ROM) or functional deficits in the long term. In contrast, CSTR may be associated with a higher risk of overcorrection, which could lead to additional complications such as joint stiffness or loss of foot mobility. However, neither technique appears to be superior to the other in terms of final outcomes, suggesting that complications associated with each approach can be effectively managed with appropriate surgical planning and postoperative care.

The outcomes of this review indicate that both PMR and CSTR yield comparable functional and radiological improvements, but a more individualized approach should be adopted based on patient characteristics. For instance, younger patients with mild to moderate deformities may benefit from a more conservative approach, such as PMR, which involves a less extensive release of soft tissues. On the other hand, patients with severe or recurrent CTEV may require a more extensive release of tissues, such as CSTR, to achieve an optimal outcome. The decision between these techniques should, therefore, be influenced not only by the severity of the condition but also by the patient's age, the timing of surgery, and the presence of any complicating factors, such as previous treatments or failed corrective attempts.

One notable finding from this systematic review is the importance of postoperative care and rehabilitation. While both surgical techniques are effective in correcting the deformities, the long-term success of the treatment is largely influenced by rehabilitation strategies. Appropriate postoperative rehabilitation plays a crucial role in maximizing functional recovery, maintaining correction, and preventing recurrence. Patients who adhere to structured rehabilitation protocols tend to experience better outcomes, including improved functional scores and lower recurrence rates. This emphasizes the need for a multidisciplinary approach, involving both the surgical team and rehabilitation specialists, to ensure the best possible outcome for patients with CTEV.

Additionally, the complications observed in the studies reviewed, such as scar tissue formation in PMR and overcorrection in CSTR, underscore the importance of careful surgical planning and individualized decision-making. Surgeons should aim to minimize the risk of these complications through precise surgical techniques and by taking into account each patient's unique anatomical and clinical characteristics. Moreover, these complications highlight the need for long-term follow-up and monitoring, as early detection and intervention can significantly reduce the impact of postoperative issues (Corbu, A., et al 2020).

Despite the promising results observed with both PMR and CSTR, the limitations of this systematic review must be acknowledged. The included studies were heterogeneous in terms of study design, patient demographics, and follow-up duration. Some studies had small sample sizes, which limits the generalizability of the findings. Furthermore, the studies reviewed did not employ standardized outcome measures, which makes it difficult to directly compare results across studies. Future research with larger, more homogenous patient populations and the use of consistent outcome measures would help strengthen the evidence and provide clearer guidance on the optimal surgical technique for CTEV (Barik, S., et al 2021).

Moreover, there is a need for studies that focus on the long-term quality of life and functional outcomes of patients undergoing either PMR or CSTR. While the clinical and radiological results were comparable between the two techniques, patient-reported outcomes, such as pain levels, mobility, and overall satisfaction, were not consistently assessed across the studies. A comprehensive understanding of how these surgeries impact patients' daily lives would provide valuable information for guiding treatment decisions and informing clinical practice.

In conclusion, this systematic review found no significant differences between PMR and CSTR in terms of recurrence, functional outcomes, or complication rates for the treatment of resistant congenital talipes equinovarus. Both techniques are effective and can be considered as viable options depending on patient-specific factors. The long-term success of either approach is heavily influenced by individualized surgical planning, careful execution of the procedure, and comprehensive postoperative rehabilitation. Future studies with larger sample sizes, longer follow-up periods, and standardized outcome measures are needed to further clarify the optimal surgical approach for CTEV and to better understand the long-term implications of these treatments.

## Conclusion

This systematic review compared the effectiveness of modified Posteromedial Release (PMR) and Complete Subtalar Release (CSTR) in treating resistant congenital talipes equinovarus (CTEV). The results showed no significant differences between the two techniques regarding recurrence, functional outcomes, or complication rates. Both methods effectively corrected deformities, with comparable postoperative radiological and functional improvements. The choice of surgical approach depends more on patient-

specific factors such as age and deformity severity than on the superiority of one method over the other. While complications like scar tissue formation in PMR and overcorrection in CSTR require careful management, the long-term success of both techniques is largely influenced by individualized surgical planning and postoperative rehabilitation. Future studies with larger sample sizes, standardized outcome measures, and extended follow-up are needed to clarify the optimal surgical approach for CTEV.

## Acknowledgment

The authors would like to thank the Department of Orthopaedic and Traumatology, Faculty of Medicine, Udayana University, Prof. Ngoerah General Hospital, Bali, Indonesia, for academic support and access to resources that facilitated the completion of this systematic review. The authors also appreciate the contributions of all researchers whose studies were included in this review.

## Conflict of Interest

There is no conflict of interest.

## Author Contribution

**I Putu Lari Sandy:** Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Writing – Original Draft.

**Made Agus Maharjana:** Validation, Writing – Review & Editing, Supervision, Project Administration.

## References

Barik, S., Das, L., Yadav, A. K., Arora, S. S., & Singh, V. (2021). Results of ala carte posteromedial soft tissue release in idiopathic clubfoot. *Malaysian Orthopaedic Journal, 15*(2), 89–95. https://doi.org/10.5704/MOJ.2107.013

Cooper, D. M., & Dietz, F. R. (1995). Treatment of idiopathic clubfoot: A thirty-year follow-up note. *The Journal of Bone and Joint Surgery. American Volume, 77*(10), 1477–1489.

Corbu, A., Cosma, D. I., Vasilescu, D. E., & Cristea, S. (2020). Posteromedial release versus Ponseti treatment of congenital idiopathic clubfoot: A long-term retrospective follow-up study into adolescence. *Therapeutics and Clinical Risk Management, 16*, 813–819. https://doi.org/10.2147/TCRM.S262199

Gupta, S., Kanojia, R. K., & Lohia, L. (2014). Comparative study of posteromedial release and complete subtalar release in resistant/recurrent congenital talipes equinovarus foot: A five-year follow-up study. *Current Orthopaedic Practice, 25*(1), 43–52. https://doi.org/10.1097/BCO.0000000000000040

Hassan, F. O., Jabaiti, S., & El Tamimi, T. (2010). Complete subtalar release for older children with recurrent clubfoot deformity. *Foot and Ankle Surgery, 16*(1), 38–44. https://doi.org/10.1016/j.fas.2009.02.002

Hutchins, P. M., Foster, B. K., Paterson, D. C., & Cole, E. A. (1985). Long-term results of early surgical release in clubfeet. *The Journal of Bone and*

*Joint Surgery. British Volume, 67*(5), 791–799.

Kaewpornsawan, K., Khuntisuk, S., & Jatunarapit, R. (2007). Comparison of modified posteromedial release and complete subtalar release in idiopathic clubfoot: A randomized controlled trial. *Journal of the Medical Association of Thailand, 90*(5), 936–941.

Mahapatra, S., & Abraham, V. T. (2016). A comparative analysis of the two most common surgical exposures for clubfoot. *International Surgery Journal, 3*(3), 1283–1286. https://doi.org/10.18203/2349-2902.isj20162026

Nimityongskul, P., Anderson, L. D., & Hansen, G., Jr. (2002). Surgical treatment of clubfoot: A comparison of two techniques. *Foot & Ankle, 13*(3), 116–124. https://doi.org/10.1177/107110079201300302

Özkan, I., Tetik, C., Eksioglu, F., Gudemez, E., & Sepici, B. (1995). Surgical treatment in congenital clubfoot: A comparison of posteromedial and complete subtalar release. *Joint Diseases and Related Surgery, 6*(2), 32–36.

Parameshwari, T., Thulasiram, K., Narender, D., Kalyani, N., & Anjaneyulu, K. (2020). A study of surgical management of idiopathic congenital talipes equinovarus by posteromedial soft tissue release. *International Journal of Research in Orthopaedics, 6*(5), 933–938. https://doi.org/10.18203/issn.2455-4510.IntJResOrthop20203048

Ponseti, I. V. (2005). Treatment of congenital clubfoot. *The Journal of Bone and Joint Surgery. American Volume, 87*(7), 1529–1537. https://doi.org/10.2106/JBJS.D.03026

Rumyantsev, N. J., & Ezrohi, V. E. (1997). Complete subtalar release in resistant clubfoot: A critical analysis of results. *Journal of Pediatric Orthopaedics, 17*(4), 490–495.

Simons, G. W. (1987). The complete subtalar release in clubfeet. *Orthopedic Clinics of North America, 18*(4), 667–688.

Singh, V., Yadav, A., Vyas, G. S., Sharma, S. K., Patidar, A., Mehta, R., Bhinde, S., & Jain, P. (2020). Outcome of posteromedial soft tissue release in congenital talipes equinovarus. *Orthopaedic Journal of M. P. Chapter, 26*(2), 65–69.

Staheli, L. T. (2003). *Clubfoot: Ponseti management*. Global-HELP Organization.

Thompson, G. H., Richardson, A. B., & Westin, G. W. (1982). Surgical management of resistant congenital clubfoot deformities. *The Journal of Bone and Joint Surgery. American Volume, 64*(5), 652–665.

Wainwright, A. M., Auld, T., Benson, M. K., & Theologis, T. N. (2002). The classification of congenital talipes equinovarus. *The Journal of Bone and Joint Surgery. British Volume, 84*(7), 1020–1024.

Zionts, L. E., Zhao, G., Hitchcock, K., Maewal, J., & Ebramzadeh, E. (2010). Has the rate of extensive surgery to treat idiopathic clubfoot declined in the United States? *The Journal of Bone and Joint Surgery. American Volume, 92*(4), 882–889. https://doi.org/10.2106/JBJS.I.00

819