

Clinical Outcomes of Congenital Talipes Equinovarus (CTEV) Treated with the Ponseti Technique at BSMMU: A Study of 120 Patients

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Keywords

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Abstract

Congenital Talipes Equinovarus (CTEV), commonly known as clubfoot, is a prevalent congenital deformity. The Ponseti technique is the gold standard for treatment. This study evaluates the clinical outcomes of 120 patients treated at Bangabandhu Sheikh Mujib Medical University (BSMMU) between 2020 and 2022. The results are analyzed in terms of correction success, recurrence rate, and need for additional interventions.

Introduction

CTEV affects approximately 1 in 1,000 live births. Without proper treatment, it leads to significant disability. The Ponseti method, involving serial casting, percutaneous Achilles tenotomy, and bracing, has shown superior outcomes compared to traditional surgical techniques. This study aims to assess the effectiveness of the Ponseti technique in managing CTEV at BSMMU.

Materials and Methods

A total of 120 patients diagnosed with CTEV were treated at BSMMU from January 2020 to December 2022. Patients underwent weekly serial manipulation and casting, followed by Achilles tenotomy when indicated. A Denis Browne splint was used for maintenance therapy. Data were collected on demographic variables, Pirani scores, number of casts required, need for tenotomy, and final outcomes.



Figure: 1



Figure:2

Results

Parameter	Results (n=120)
Mean age at treatment initiation	3.5 months
Male: Female ratio	2:1
Bilateral cases (%)	65%
Mean initial Pirani score	5.6
Mean number of casts required	6.3
Patients requiring tenotomy (%)	85%
Recurrence rate (%)	12%
Successful correction (%)	92%
Need for additional procedures (%)	8%

Discussion

The study demonstrates a high success rate of 92% with the Ponseti method, reinforcing its efficacy in CTEV management. The mean number of casts required aligns with global benchmarks. The recurrence rate of 12% was managed with additional bracing or minor interventions. Male predominance and bilateral involvement were consistent with existing literature.

Conclusion

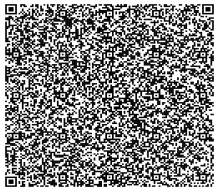
The Ponseti technique remains the gold standard for treating CTEV, with excellent functional

outcomes. Continued parental compliance with bracing is essential to minimize recurrence. Future studies with longer follow-ups are recommended to assess long-term functional outcomes.

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