



POSICON 2021.

E poster.

Title: A Study on management of congenital clubfoot by Ponseti technique in a rural medical college in India.

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Introduction.

Congenital clubfoot, also known as CTEV (congenital talipes equinovarus) is a common and debilitating congenital musculoskeletal anomaly. The incidence of congenital clubfoot is approximately one in every 1000 live births. The three basic components of clubfoot are equinus, varus and adduction deformities. It is accompanied by internal tibial torsion. The ankle, midtarsal, and subtalar joints all are involved in the pathological process. The bony changes are followed by soft tissue changes, which increase the deformity. The Ponseti technique has now become the mainstay of treatment in this condition. The purpose of this study was to evaluate the effectiveness of the Ponseti technique in the correction of this deformity, through the assessment of modified Pirani score.

Methods.

This was a prospective observational study conducted on 75 patients of either sex with 100 feet, with an average age of 3.6 months presenting to the Orthopaedic OPD of SHKM Government Medical College Hospital, Nalhar, Nuh, Haryana between September 2015 and September 2017, with a diagnosis of congenital clubfoot. All the patients were treated with Ponseti technique and the results were analysed through the assessment of modified Pirani score. The patients were followed up for a period of 1 year after attainment of correction.

Results.

Most of the patients in our study attained full correction with Ponseti method. The mean value of the modified Pirani score improved from the pre-treatment value of 5.30 to 0.36 at the final follow up. The average number of casts required for full correction was 7.32. Percutaneous tendoachilles tenotomy was required in 67 of the 100 feet.

Table depicting the results of the study.

| Parameter | Age of the patients at presentation in months | Modified Pirani score before treatment | Modified Pirani score at follow up of 1 year | Number of casts applied for achievement of correction |
|-----------------------------|---|--|--|---|
| Mean value of the parameter | 3.6 | 5.30 | 0.36 | 7.32 |

CONCLUSION

From the above analysis, we can infer that the Ponsetti technique is a simple and highly effective modality of treatment for correction of congenital clubfoot, especially in rural and underdeveloped regions.

Fig 1. Clinical picture of a patient with bilateral clubfoot at presentation



Figure 2: a) Cast applied for correction of cavus deformity, b) Casts applied for correction of adduction deformity, c) Final cast applied in maximal dorsiflexion and abduction, d) A patient at follow up with brace in situ.

