

An evaluation of the initial two years of the Ponseti clubfoot programme based at Parirenyatwa hospital, Harare

Background: Clubfoot is the most common congenital deformity affecting mobility. Approximately 80% of cases occur in low- and middle-income countries (LMICs). The Ponseti method is considered the best practice for treatment. Greater understanding of the factors which influence outcomes of the Ponseti method is needed to plan national programmes.

This case series evaluates the outcomes of clubfoot treated by the Ponseti method at a clinic in a tertiary hospital in Zimbabwe and explores potential predictors of these outcomes.

Methods: Demographic data, clinical features and treatment outcomes of clubfoot cases managed from March 2011 to April 2013 were extracted from the clubfoot clinic records. The primary outcome measure was change in Pirani score while under treatment. The secondary outcomes included the number of casts for correction, tenotomy coverage, recurrence of deformity and loss to follow up.

A random effects model was used to explore factors associated with the change in Pirani score. Adjusted estimates were obtained with a backward elimination approach. A linear regression model was used for the number of casts and logistic regression models were used for the binary variables of tenotomy, recurrence and loss to follow up.

Results: 218 children (337 feet) were included in the case series. The median age at first treatment was seven months. 161 children completed treatment and continued to the bracing phase within the study time period. The mean post treatment Pirani score was 0.57. Severity of clubfoot deformity and previous treatment were associated with increased likelihood of tenotomy. Severity and age over two years related to an increase in the number of casts required to correct deformity.

Conclusion: Age over two years, history of previous treatment and severity of deformity were found to be associated with outcomes of the Ponseti method. Consensus is required to define successful outcomes of Ponseti treatment.