

Risk factors of relapse clubfoot

S.J.M. Ummul Ambia

Bangladesh

M.Sc. in Rehabilitation Science (1st Batch; Session: 2014-2015)

E-mail: ummulambia@gmail.com

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Introduction

The Ponseti method is the gold standard of nonsurgical treatment of clubfoot deformity. The initial casting phase leads to correction of the clubfoot. In the subsequent maintenance phase a foot abduction brace (FAB) has to be applied for 4 years: first 22 hours per day, later during the night only. There is a chance of clubfoot relapse. Aim of this study is to examine risk factors.

Material and methods

50 children with completed Ponseti treatment formed the study sample: 25 showed relapse (cases) and 25 without relapse (control group). Demographic data, compliance with FAB and problems were reported by caregivers. Foot status (Pirani score) and child's functional abilities were assessed by the PT. Data were analyzed using SPSS (Odds ratio and Chi² calculations).

Results

Noncompliance was the factor most related to the risk of relapse: not wearing FAB as prescribed (odds ratio = 0.038; 95% CI: 0.006 - 0.263), significantly less stretching exercises done and less follow-up control visits. Noncompliance 'reasons': child's continuous crying, problems in applying FAB, in carrying child with FAB and performing daily care; these were significantly less mentioned in the control group. Demographic risk factors: caregiver not being the child's mother, low education, younger siblings, not aware of child's functional limitations and living in rural area. Treatment risk factors: later initial casting and no tenotomy.

Conclusion:

Lack of treatment adherence is the most prominent risk factor of clubfoot relapse. This urges for a caregiver's tailor-made educational program directed to avoidable causes of relapse and its long-term financial and social consequences.

Key words: Clubfoot, Ponseti method, Relapse, Risk factors.

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