

Abstracts and presentations



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Room V

PLR5-2327 COMMUNITY-BASED REHABILITATION PROGRAM FOR CEREBRAL PALSY (CP) CHILDREN IN NORTH UGANDA

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Background: CP is a common neurologic disease in children, with a worldwide estimated prevalence of 93 million. Data on the African context are limited.

Purpose: This study was aimed at evaluating the efficacy of a mixed outpatient/home physiotherapy program in children with CP admitted to St. Mary's Lacor Hospital (Gulu), the reference center of north Uganda.

Methods: This is an observational, uncontrolled, prospective study. All children with CP (aged from 0.5 to 12 years) admitted in the Physiotherapy Unit from January to December 2017 were enrolled. A written consent form (English or Acholi language) was obtained from the mother/ caregiver. Each patient was evaluated at baseline and every two weeks for three months. CP sub-types were defined according to Surveillance of Cerebral Palsy in Europe classification. The child's abilities were staged through the Gross Motor Function Classification System Expanded and Revised (GMFCS-E&R; scale from I to V, the higher the worse). Changes in motor function were measured through the 66-item version (GMFM-66; scores ranging from 0 to 100, the higher the better). At baseline and subsequent visits, Bobath treatment was applied for 30 minutes by an experienced physiotherapist, who trained the caregiver on customized home exercises following a diary prescription. The functional status reported by the caregiver and the overall compliance were assessed. Changes in GMFCS-E&R and GMFM-66 at 6 and 12 weeks were recorded. The normality of score distributions was tested (Shapiro-Wilks). If confirmed, repeated ANOVA modeling was applied to scores across time points.

Results: Fifty-two consecutive children were enrolled (mean age 2.2 years, range 0.5-9.9). Spastic bilateral (19 patients, 36%) and dystonic (16, 31%) were the most common CP sub-types. The main cause of CP were asphyxia during the delivery (26 cases, 50%) and cerebral malaria (10, 19%). Thirty-three/52 cases (67%) presented level V GMFCS-E&R. GMFM-66 mean score at baseline was 19.86 range: 0-52.9. Seventeen/52 (33%) children were assessed at 6 and/or 12 weeks, while 35 (67%) missed at least three study visits (reasons: 28 transportation cost, 2 remote home, 4 other). In 16/17 (94%) patients home exercises were performed correctly. The GMFM-66 mean score increased from 14.8 at baseline to 20.4 and to 24.9 at 6 weeks ($p=0.02$) and 12 weeks ($p=0.00$), respectively. The improvement was observed irrespectively from CP sub-type or cause of disability.

Conclusion(s): Although on a small number of patients, this study suggests that a mixed outpatient/home physiotherapy program can improve CP disability in compliant children treated in a developing country, like north Uganda. The high drop-out rate and its causes point towards the need for implementing local community programs and/or transport facilities.

Implications: These results suggest that a mixed outpatient/home physiotherapy program can benefit children with CP living in developing countries and strengthen the need of a policy aimed at improving the access to the physiotherapy service. In addition, they confirm that neurological damage during the assisted delivery is the major cause of CP in this context.

Key-Words: Cerebral palsy, physiotherapy, caregiver, developing country

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