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Constipation Widespread and Comparison of Polyethylene Glycol with Lactulose Efficacy in Treatment of Patients with Constipation

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ABSTRACT

Introduction: Cerebral palsy (CP) is a neurologic disorder that manifests symptoms such as impaired movement control. Constipation is also highly prevalent (26%- 74%) among children. In this study, we investigated the prevalence of constipation and the management of constipation symptoms in children and compared the efficacy of polyethylene glycol (PEG) and lactulose in treatment. We also assessed the control of adverse complications such as intestinal bleeding.

Methods and Materials: This prospective cross-sectional study was conducted on 48 patients with CP aged 1 to 15 years at Mardani Azar Children's Hospital in Tabriz for 12 months (January to December 2022). According to the ROME IV criteria for defining constipation, the prevalence among patients diagnosed with CP was investigated. Patients were randomly divided into two groups, each consisting of group 24 individuals, using computer-generated numbers. The first group received PEG, while the second group was treated with lactulose. They were monitored for one month and then for their symptoms and outcomes every three months. Overall success was defined as having a frequency of defecation greater than twice a week and experiencing fecal incontinence no more than once a week. Statistical analyses were conducted using the chi-square test, student's t-test, and logistic regression using SPSS v. 26.

Results: A significant alteration was observed in defecation frequency and fecal incontinence 12 and 24 weeks after the start of treatment. Defecation frequency rose from 5.3% to 6.3% in the first group and from 5% to 5.7% in the second group (p = 0.01). The success rates for 12 weeks were 57% and 33% for the first and second groups, respectively (p = 0.04). Also, the success rate for 24 weeks was 62% for the first group and 37% for the second group (p = 0.02). The difference in success rates between the two-drug treatments was significant, leading us to conclude that PEG could be a more suitable option.

Conclusion and Discussion: Constipation is one of the critical problems among children with CP, and PEG could provide more favorable outcomes than lactulose as a treatment option for patients with constipation.

Keywords: Cerebral palsy, Constipation, Lactulose, Polyethylene glycols, Prevalence