

Effectiveness of Calcium as a Treatment for Managing the Symptoms and Severity of Dengue - A Single Center Study

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Dengue has become a major public health concern with high rates of morbidity and mortality in Sri Lanka. Apart from careful monitoring with supportive therapies like fluid management and fluid correction, dengue has no specific antiviral treatment. Calcium is crucial for coagulation and immune system, but information of its role in dengue is limited. Dengue immunopathogenesis is linked to hypocalcemia but its clinical implications are unclear. This study aims to identify the contribution of calcium in regulating dengue clinical symptoms and incidence of critical disease among calcium treated and untreated dengue patients. This is a prospective, observational study conducted among 386 dengue patients admitted in the medical wards of Teaching Hospital, Peradeniya over two years. All patients were confirmed with dengue NS1 antigen positivity. An interview-based questionnaire was given to patients treated with calcium (n=193) and without calcium (n=193) to record the duration of symptoms. Data was analyzed using non-parametric Mann-Whitney test in SPSS 25. The study found that patients who had received oral calcium carbonate showed significant differences in the duration of symptoms compared to those who did not. Significant differences were observed in the manifestation of general symptoms, nasal stuffiness, phlegm, sore throat, wheezing, myalgia, body aches and pain in patients receiving calcium compared to those who did not ($p < 0.05$). Among the patients who received calcium, 60 (31.09%) were progressed into the DHF while it was 76 patients (39.38%) in non-calcium group ($p < 0.001$). A significant difference ($p < 0.001$) was seen in the duration of the hospital stay between patients with DHF who did not take calcium and those who did (5.33 days \pm 1.39). According to these results, further research is needed to assess the effectiveness of calcium as a specific treatment option in the management of dengue.

Keywords: Dengue, DHF, Calcium Treatment, Symptoms, Sri Lanka

Acknowledgement, all subjects who participated in this study and staff members of Medical Ward, Teaching Hospital, Peradeniya, Sri Lanka who supported in data collection.