



Chlorhexidine gluconate (CHX) is a bisbiguanine antiseptic with a broad spectrum of activity against Gram-positive and Gram-negative bacteria, fungi, and viruses. It is commonly used in oral care for patients with oral mucositis, a common side effect of chemotherapy. The mechanism of action of CHX involves the disruption of the cell membrane of microorganisms, leading to cell lysis and death. CHX is available in various formulations, including mouthwashes, gels, and lozenges. The use of CHX in oral care has been shown to reduce the incidence and severity of oral mucositis in patients with cancer. However, the optimal concentration and frequency of CHX use for the prevention of oral mucositis in paediatric patients with acute lymphoblastic leukemia (ALL) undergoing chemotherapy remains unclear. This study aimed to evaluate the effectiveness of 0.12% CHX mouthwash compared to 1% povidone iodine mouthwash in the prevention of oral mucositis in paediatric patients with ALL undergoing chemotherapy. The study was a randomized controlled, cross-over trial. The participants were divided into two groups: the CHX group and the povidone iodine group. The CHX group received 0.12% CHX mouthwash four times a day for 14 days. The povidone iodine group received 1% povidone iodine mouthwash four times a day for 14 days. The primary outcome was the incidence of oral mucositis, defined as the presence of oral ulcers, erythema, or pain in the mouth. The secondary outcome was the severity of oral mucositis, defined as the extent of oral mucositis on a scale of 0 to 4. The results of the study showed that the incidence of oral mucositis was significantly lower in the CHX group compared to the povidone iodine group. The severity of oral mucositis was also significantly lower in the CHX group compared to the povidone iodine group. These findings suggest that 0.12% CHX mouthwash is more effective than 1% povidone iodine mouthwash in the prevention of oral mucositis in paediatric patients with ALL undergoing chemotherapy. The use of CHX mouthwash should be considered as a first-line treatment for the prevention of oral mucositis in these patients.



