

Oral Mucositis

Examining the combined solution of grape vinegar and rose water versus chlorhexidine mouthwash

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BACKGROUND: Studies have reported contradictory findings regarding the efficacy of chemical mouthwashes for chemotherapy-induced oral mucositis.

OBJECTIVES: This study sought to compare the effect of the combined solution of grape vinegar and rose water versus chlorhexidine mouthwash on chemotherapy-induced oral mucositis.

METHODS: 60 patients were randomly assigned to either chlorhexidine or the vinegar and rose water solution. Fifty-three patients completed the study. Patients rinsed their mouths with mouthwash three times a day for 14 days.

FINDINGS: Chlorhexidine mouthwash and the grape vinegar and rose water solution decreased chemotherapy-induced oral mucositis. The therapeutic property of the grape vinegar and rose water solution was similar to that of chlorhexidine mouthwash in treating oral mucositis.

KEYWORDS

oral mucositis; chemotherapy; vinegar; rose water; chlorhexidine

DIGITAL OBJECT IDENTIFIER

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CHEMOTHERAPY-INDUCED ORAL MUCOSITIS, A MAJOR COMPLICATION of chemotherapy, involves mucosa of the oral cavity (Neville et al., 2015). It appears first as mucosa redness and then converts to mucosal ulcers as chemotherapy continues (Lalla & Bowen, 2018). The course of oral mucositis may differ by chemotherapy regimen (Cidon et al., 2018), the kind of tumor, status of oral hygiene and health (Araújo et al., 2015), nutritional status, and renal and hepatic functions (Cheng et al., 2008). The symptoms generally begin 3–14 days after the onset of chemotherapy and may end during a period of three to four weeks after the chemotherapy cycle (Lalla, Saunders, & Peterson, 2014; Villa & Sonis, 2015). About 40% of patients undergoing chemotherapy report oral mucositis (Çakmak & Nural, 2019; Razmara & Khayamzadeh, 2019).

The management of oral mucositis is a challenge. However, early diagnosis and proper management can reduce nutrition problems, dehydration, possible infection, and the duration and severity of oral mucositis (Bhatt et al., 2010; Sadasivan, 2010). Many strategies are used to minimize oral mucositis in adults and children; however, standardized strategies exist to manage oral mucositis associated with targeted therapies (Allen et al., 2010; Shankar et al., 2017). The Multinational Association of Supportive Care in Cancer/International Society of Oral Oncology proposed a guideline to manage oral mucositis; measures such as oral hygiene, diet modification, pain management, and anti-inflammatory and antimicrobial agents have been recommended for treating chemotherapy-induced oral mucositis (Lalla, Bowen, et al., 2014).

Background

Chlorhexidine is a common mouthwash. No systemic adverse effects have been reported following its administration (Cardona et al., 2017); however, the effectiveness of chlorhexidine as a mouthwash has not been confirmed to treat chemotherapy-induced oral mucositis. In addition, there were many controversies regarding the use or non-use of chlorhexidine to treat chemotherapy-induced mucositis. On the one hand, chlorhexidine has not been recommended as a treatment for cancer therapy-related mucositis (Eilers et al., 2014; Peterson et al., 2010; Worthington et al., 2011). On the other hand, studies supporting chlorhexidine use as a treatment for cancer therapy-related mucositis are mixed (Konuk Sener et al., 2019; Patil et al., 2015), but prophylactic use of chlorhexidine mouth rinse is supported (Qutob et al., 2013). Beneficial effects as a mouth rinse have been reported in