

Clinical Case Reports 2018: The effectiveness of baking soda as mouth wash in reducing oral mucositis among Pemphigus vulgaris patients- Anandha Ruby Jacob- Christian Medical College & Hospital

Anandha Ruby Jacob

Christian Medical College & Hospital, India

Pemphigus vulgaris is a chronic autoimmune intra epithelial blistering disease. Usually affects the oral mucous in 80% of cases leading to significant decrease in patient's daily functioning of oral cavity and quality of life. This is because of the bad odor, tastelessness, difficulty or inability to eat, drink or speak. Objective of the study is to assess the pre-interventional level of oral mucositis, to assess the effectiveness of baking soda as mouth wash in reducing oral mucositis, to find out the association between the post-interventional level of oral mucositis with the selected demographic variables. Method adopted was quantitative approach, pre-post control design randomized and conducted in the dermatology OPD and the dermatology ward of Christian Medical College, Vellore. A sample of 60 subjects was selected for the study using purposive sampling technique. Effectiveness of baking soda as mouth wash in reducing oral mucositis was assessed using Saraswat oral Pemphigus score, by the research assistant blinded to group assignment on 1st and 7th day. Descriptive and inferential statistics was used for data analysis. Results shows no evidence to conclude that baking soda mouth wash is effective than normal saline in reducing oral mucositis among pemphigus vulgaris. There is no association ($p=0.68$) between the post interventional oral mucositis and the selected demographic variables. Conclusion is dermatology nurses should recognize the need for assessment of oral mucositis on a daily basis and provide the most appropriate and cost effective interventions. These interventions could be prepared in simple way at home for their long term use, in alleviating the pain and discomfort.

Pemphigus is a group of autoimmune blistering disorders. Pemphigus affects 0.1-0.5 patients per 1,00,000 population per year. Pemphigus vulgaris (PV) is the most common and main variant among pemphigus that affects the mouth. 50- 90% of patients has oral lesions as the first manifestation in this disease (Ruoco, Dagistan, Ariyawardana, Shamim, Camacho, Ben Lagha, Mihai). The highest incidence in 5th and 6th decade of life with the ratio of 1:2 for male to female. Increase of cases from 0.5 to 3.2 cases of every year per 100,000 population. However there is a major difference in the prevalence of oral lesions in the areas like 66% in Bulgaria, 83% in Italia and 92% in Israel (Black). The response of cutaneous lesions are much higher in comparison with the oral lesion which is now a great challenge (Bystry). The clinical consequence of oral mucositis is multifaceted. This is the most serious painful and detrimental condition leading to significant decrease in their daily oral functioning and quality of life because of the bad odour,

tastelessness, difficulty or inability to eat, drink, swallow or speak. Poor oral care result in oropharyngeal colonization. Mouthwashes can control the oral lesions in patients with low titres of circulating antibodies. The chemical name of baking soda is "sodium bicarbonate". It is a natural buffer that maintains a healthy pH in mouth to promote a clean and fresh oral environment also neutralizes the production of acid in the mouth by acting as an antiseptic to help prevent infections.

Mouthwashes were dispensed in identical 500 ml coded plastic bottles with 350 ml of respective mouthwash solution and a measuring cup was given to take 100 ml of solution at a time after the meals. A patient assigned a particular number was given the mouthwash bottles with the same number. Each patient was given 7 bottles with the same numbered mouthwash on the first visit to OPD, to use it at home for 7 days. The patients were instructed to rinse their mouth and throat with 100 ml of the given mouthwash, thrice a day for a period of 7 days. They were asked to swish the mouth for about 1 minute and to expectorate. They were asked to do after each meals and to abstain from eating for half-an-hour after mouthwash. Patient compliance was assessed on the 7th day of their visit to dermatology OPD by checking the level of mouthwash left in the bottles. Oral mucositis was assessed at baseline on 1 st day and reassessed on the 7th day by research assistant (dermatology OPD staff nurse trained by the investigator) using Saraswat's oral pemphigus score. A single research assistant had carried out the assessments to reduce inter-rater variability. The management of oral mucositis is with oral hygiene, adequate hydration and controlling pain. Using proper mouth wash oral mucositis can be prevented. Adherence to soft diet till the lesions heal. Teeth should be checked after the mouth washes. Pharmacists modify the compound preparations for patient better compliance. Thus the investigator was intended to study the effectiveness of baking soda with normal saline. Sodium bicarbonate (baking soda) provides deodorizing, buffering activities, clean and refreshing effect and neutralizes the production of acid in the mouth. It also has an antiseptic to prevent infections. This mouth wash can be prepared at home. Recommendations is to dissolve ½ teaspoon of sodium bicarbonate or baking soda in 250 ml of water. No side effects were recorded in either of the groups. To our knowledge the comparison of use of baking soda and normal saline in pemphigus vulgaris patients with oral mucositis has not been reported much in the literature.

Based on the findings appropriate recommendations were made. Dermatology nurses will be able to recognize the need for assessment of oral mucositis on a daily basis and provide most appropriate and cost effective interventions that could be

prepared in simple way at home for their long term use in alleviating the pain and discomfort by providing alcohol free mouth wash for patients with pemphigus vulgaris.