International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 05, 2020
ISSN: 1475-7192

A comparative study of Therapeutic oral hygiene versus conventional oral hygiene among patients having Ryle's Tube

[1]Manisha C. Gholap, [2]Dr Mahadeo Shinde, [3]Samir K. Choudhari, [4]Sanila M.Thomas, [5]Asha K. Koshy, [6]Silpa Mathew, [7]Shubham Pawar, [8]Sneha Patil

ABSTRACT:

Background: *Patients with Ryle's Tube may be more vulnerable to oral disease and discomfort than the general population and may be unable to care themselves. Oral health is a functional, structural, physiologic and psychosocial state of wellbeing and essential to an individual's general health and quality of life.*

Objective: *To compare the effect of therapeutic oral hygiene and conventional oral hygiene among patients having Ryle's Tube.*

Methods: *Experimental Research design was used to conduct the study among patients admitted in the general wards and totally 64 patients were selected by Purposive sampling technique and further divided into 32 in Experimental group and 32 in control group. Data was collected by using structured questionnaire. Informed written consent was obtained from all the participants. Oral hygiene assessment tool was used to assess the oral condition. To Experimental group 4 hourly mouth wash is giving with sodium chloride and sodium bicarbonate and to the conventional group regular hospital routine management were followed. After 5 days oral condition was assessed to compare the effect of methods.*

Results: *Mean of Experimental group was 10.406 and SD 1.103 and mean of control group of 2.468 and SD 1.244, calculated t value was 27.007 found statistically significant at the level of p<0.0001.*

Conclusion: *Study results conclude that therapeutic method was found effective to improve the oral hygiene patients with Ryles tube.*

Keywords: *effectiveness, therapeutic oral hygiene, conventional oral hygiene, Ryle's Tube*

[1] Associate Professor, Krishna Institute of Nursing Sciences, Karad.
[2] Professor, Krishna Institute of Nursing Sciences, Karad.
[3] Clinical Instructor, Krishna Institute of Nursing Sciences, Karad.
[4] B.B.sc. Nursing Student, Krishna Institute of Nursing Sciences, Karad.
[5] B.B.sc. Nursing Student, Krishna Institute of Nursing Sciences, Karad.
[6] B.B.sc. Nursing Student, Krishna Institute of Nursing Sciences, Karad.
[7] B.B.sc. Nursing Student, Krishna Institute of Nursing Sciences, Karad.
[8] B.B.sc. Nursing Student, Krishna Institute of Nursing Sciences, Karad.

Received: 09 Jan 2020 | Revised: 18 Feb 2020 | Accepted: 29 Mar 2020

I. Introduction:

Nasogastric tube (NGT) feeding is temporarily effective for nutritional management in patients with inadequate oral intake. [1] Mouth care is of great importance of patients who are dependent on nursing staff to maintain oral hygiene. Providing oral care and hygiene should be considered as a fundamental aspect of nursing care in ICUs. [2] Prevention of oral disease can be achieved by optimizing the oral health practices in the form of proper tooth brushing, use of dental floss, dental visits at regular intervals, and proper dietary practices. [3] Oral diseases adversely affect concentration, interpersonal relationship, and productivity. [4]

Patients with Ryle's Tube may be more vulnerable to oral disease and discomfort than the general population and may be unable to care themselves. Poor oral hygiene is a known important predisposing factor of some oral diseases like cancrum oris, periodontitis, acute necrotizing ulcerative gingivitis (ANUG) and Gingivitis. Oral hygiene and personal hygiene are about the cheapest from of preventive health measure thought cheap it is surprisingly one of the most ignored practice. Oral health is a functional, structural, physiologic and psychosocial state of wellbeing and essential to an individual's general health and quality of life. Patients are dependent on oral hygiene. Special mouth must be given as often as necessary hourly, two hourly or at least four hourly. Require special mouth care is essential for some patients suffering from specific illnessoral hygiene prevents plaque, infection, mouth sores, bleeding gums and cavities. As a result, it is very important. It also helps to freshen breath and prevent infection

Ryle's Tube feedings are mainly used in patients with acute and chronic problems. Like nutritional status included weight loss, hemoglobin level, hematocrit, and serum albumin level. Therefore, the aim of the present study was to compare the effect of therapeutic oral hygiene and conventional oral hygiene among patients having Ryle's Tube.

II. Methods:

Experimental Research design was used to conduct the study among patients admitted in the general wards and totally 64 patients were selected by Purposive sampling technique and further divided into 32 in Experimental group and 32 in control group. The samples included in this study were who fulfilled the inclusion criteria with admitted in general wards, the patients who are having Ryle's Tube, The patients who is willing to participate in the study and More than 18 years of age. Patient with critically ill excluded from the study. Data was collected by using structured questionnaire. Informed written consent was obtained from all the participants. Oral hygiene assessment tool was used to assess the oral condition. To Experimental group 4 hourly mouth wash is giving with sodium chloride and sodium bicarbonate and to the conventional group regular hospital routine management were followed. After 5 days oral condition was assessed to compare the effect of methods.

III. Results:

Table 1 Description of sample characteristics:

Characteristics	Experimental group		Control group	
	Frequency	Percentage	Frequency	Percentage
Age				
<30	5	15.62	7	21.87
30-60	17	53.12	18	56.25
60 -90	9	28.12	7	21.87
>90	1	3.12	0	0
Gender				
Male	18	56.25	19	59.37
Female	14	43.75	13	40.62
Religion				
Hindu	26	81.25	25	78.12
Muslim	6	18.75	6	18.75
Christian	0	0	1	3.12
Place of Residence				
Rural	20	62.5	19	59.37
Urban	12	37.5	13	40.62
Education				
Illiterate	3	9.37	1	3.12
Primary	12	37.5	13	40.62
High school	11	34.37	10	31.25

Received: 09 Jan 2020 | Revised: 18 Feb 2020 | Accepted: 29 Mar 2020

Graduate	5	15.62	8	25
Post graduate	1	3.12	0	0
Occupation				
Employed	17	53.12	18	56.25
Unemployed	4	12.5	2	6.25
Housewife	11	34.37	12	37.5
Income				
Below2000	1	3.12	0	0
2001-3000	5	15.62	0	0
3001-4000	4	12.5	8	25
4001-5000	10	31.25	11	34.37
Above5000	12	37.5	13	40.62
Diet				
Vegetarian	12	37.5	13	40.62
Non – vegetarian	20	62.5	19	59.37

FINDINGS RELATED TO EXPERIMENTAL GROUP

Table No:1 reveals that in experimental group according to age maximum Ryle's tube patients in experimental group 17(53.12%)belonged to age group of 30-60 years,9(28.12%) were from 60-90 years,5(15.62%)were from below 30 years, only 1(3.12%)was above 90 years. As per gender majority 18(56.25%)were from male, and 14(43.75%) were from female. According to Religion majority 26(81.25%)were from hindu religion ,6 (18.75%)were muslim and no one was from Christian religion .According to residence 20(62.5%)were from rural area and 12(37.5%)were from urban area .As per education majority of patients 12(37.5%)were educated up to primary level,11(34.37%)were educated up to high school,5(15.62%)were educated up to graduation level , 3(9.37%)were illiterate and 1(3.12%)were educated up to post graduate level. As per occupation 17(53.12%)were employed 11(34.37%) were housewife and 4(12.5%)were unemployed. According to family maximum 12(37.5%)had income of above5000, 10(31.25%)

had income of 40001-5000,5(15.62%) had income of 2001-3000,4(12.5%) had income of 3001-4000 and minimum 1(3.12%) had income of below 2000. According to diet 20(62.5%) were non vegetarian and 12(37.5%) were vegetarian.

FINDINGS RELATED TO CONTROL GROUP

Table No:1 reveals that in control group according to age maximum Ryle's tube patients in control group 18(56.25%)belonged to age group of 30-60 years,7(21.87%) were from 60-90 years and 7(21.87%)were from below 30 years, no one was their above 90 years. As per gender majority 19(59.37%)were from male, and 13(40.62%) were from female. According to Religion majority 25(78.12%)were from Hindu religion ,6 (18.75%)were Muslim and 1(3.12%) from Christian religion .According to residence 19(59.37%)were from rural area and 13(40.62%)were from urban area .As per education majority of patients 13(40.62%)were educated up to primary level,10(31.25%)were educated up to high school,8(25%)were educated up to graduation level , 1(3.12%)were illiterate and no one were educated up to post graduate level. As per occupation 18(56.25%)were employed, 12(37.5%) were housewife and 2(6.25%)were unemployed. According to family maximum 13(40.62%)had income of above5000, 11(34.37%) had income of 40001-5000,8(25%) had income of 3001-4000, no one had income of 2001-3000and below 2000 According to diet 19(59.37%) were non vegetarian and 13(40.62%) were vegetarian.

Table 2 Comparison the effect of therapeutic oral hygiene and conventional oral hygiene among patients having Ryle's Tube:

TEST	MEAN	SD	t VALUE	P VALUE
Experimental Post-Test Score	10.406	1.103	27.007	<0.0001 ***
Control Post-Test Score	2.468	1.244		

Table no. 2 shows that the Mean of Experimental group was 10.406 and SD 1.103 and mean of control group of 2.468 and SD 1.244, calculated t value was 27.007 found statistically significant at the level of $p<0.0001$.

Table 3 Association between socio demographic variables of experimental group with pre- test score.

	POOR (0-4)	AVERAGE (5-8)	GOOD (9-12)	Chi-square Value	P-VALUE

AGE					
1)<30	5	0	0	0.7669	0.8574
2)30-60	16	1	0		
3)60-90	8	1	0		
4)>90	1	0	0		
GENDER					
1)MALE	18	0	0	2.743	0.0977
2)FEMALE	12	2	0		
RELIGION					
1)HINDU	24	2	0	0.4923	0.4829
2)MUSLIM	6	0	0		
3)CHRISTIAN	0	0	0		
PLACE OF RESIDENCE					
1)RURAL	19	1	0	0.1422	0.7061
2)URBAN	11	1	0		
EDUCATION					
1)ILLETRATE	3	0	0	3.385	0.3360
2)PRIMARY	10	2	0		
3)HIGH SCHOOL	11	0	0		
4)GRADUATE	5	0	0		
OCCUPATION					

1)EMPLOYED	17	0	0	4.073	0.1305
2)UNEMPLOYED	4	0	0		
3)HOUSE WIFE	9	2	0		
INCOME					
1)BELOW2000	1	0	0	4.693	0.3202
2)2001-3000	5	0	0		
3)3001-4000	4	0	0		
4)4001-5000	8	2	0		
5)ABOVE 5000	12	0	0		
DIET					
1)VEGETARIAN	12	0	0	1.280	0.2579
2)NON VEGETARIAN	18	2	0		

Table 3 reveals that there was no any significant association found in between age, gender, Religion, Place of residence, education, Occupation, Income, Diet. ($p>0.05$)

Table 4 Association between socio demographic variables of control group with pre- test score

	POOR (0-4)	**AVERAGE (5-8)**	**GOOD (9-12)**	**Chi-square Value**	**P-VALUE**
AGE					
1)<30	7	0	0	7.619	0.022
2)30-60	18	0	0		

3)60-90	5	2	0		2
4)>90					
GENDER					
1)MALE	18	1	0	0.07773	0.7804
2)FEMALE	12	1	0		
RELIGION					
1)HINDU	23	2	0	0.5973	0.7418
2)MUSLIM	6	0	0		
3)CHRISTIAN	1	0	0		
PLACE OF RESIDENCE					
1)RURAL	17	2	0	1.460	0.2270
2)URBAN	13	0	0		
EDUCATION					
1)ILLETRATE	1	0	0	3.118	0.3738
2)PRIMARY	11	2	0		
3)HIGH SCHOOL	10	0	0		
4)GRADUATE	8	0	0		
OCCUPATION					
1)EMPLOYED	17	1	0	0.2370	0.8882
2)UNEMPLOYED	2	0	0		
3)HOUSE WIFE	11	1	0		

INCOME					
1)BELOW2000	0	0	0	6.400	0.0408
2)2001-3000	0	0	0		
3)3001-4000	6	2	0		
4)4001-5000	11	0	0		
5)ABOVE 5000	13	0	0		
DIET					
1)VEGETARIAN	13	0	0	1.460	0.2270
2)NON VEGETARIAN	17	2	0		

Table 4 reveals that there was no any significant association found between gender, religion, place of residence, education, occupation, income, diet. ($p>0.05$)

IV. Discussion:

The result of the present study shows that Mean of Experimental group was 10.406 and SD 1.103 and mean of control group of 2.468 and SD 1.244, calculated t value was 27.007 found statistically significant at the level of $p<0.0001$. Hence the therapeutic oral hygiene found effective method than conventional method. There was no significant association found between gender, religion, place of residence, education, occupation, income, diet. ($p>0.05$) in both groups. The patient with ryles tube need to be take care of mouth regularly so that mouth condition will not be affected. Regular Mouth care patient with Ryles Tube will improve the mouth condition of the patients. therapeutic method is found to be effective method compare to conventional method in our study. So it can be used while taking care of the mouth of patient with ryles tube.

In experimental group therapeutic oral hygiene method was used for 4 hourly mouth wash is giving with sodium chloride and sodium bicarbonate and to the conventional group regular hospital routine management were followed. After 5 days oral condition was assessed to compare the effect of two methods. Hence it was found that therapeutic method was effective to improve the oral hygiene of the patients with ryles tube.

V. Conclusion:

Study results conclude that therapeutic method was found effective to improve the oral hygiene patients with Ryles tube.

Acknowledgment: We would like to thank all the participants for given us their valuable time and cooperation.

Declaration of Conflicting Interests: No

References:

1. Hamuro, A., Honda, M., & Tanaka, R. (2017). Oral care and prevention of pneumonia after withdrawal of nasogastric tube feeding in three elderly patients with psychiatric disorders. Clinical case reports, 6(1), 68–70. https://doi.org/10.1002/ccr3.1294
2. Atashi V, Yousefi H, Mahjobipoor H, Bekhradi R, Yazdannik A. Effect of oral care program on prevention of ventilator-associated pneumonia in intensive care unit patients: A randomized controlled trial. Iranian J Nursing Midwifery Res 2018;23:486-90
3. Azodo CC, Unamatokpa B. Gender difference in oral health perception and practices among Medical House Officers. Russian Open Med J. 2012;1:1–4.
4. Oberoi, S. S., Mohanty, V., Mahajan, A., & Oberoi, A. (2014). Evaluating awareness regarding oral hygiene practices and exploring gender differences among patients attending for oral prophylaxis. Journal of Indian Society of Periodontology, 18(3), 369–374. https://doi.org/10.4103/0972-124X.134580