

EFFECTIVENESS OF MIXED FRUIT PASTE ON ORAL CANDIDIASIS AMONG HIV PATIENTS AT CATHERINE BOOTH HOSPITAL AT KANYAKUMARI DISTRICT.

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ABSTRACT

Background: People with advanced HIV infection are vulnerable to infections and malignancies that are called Opportunistic infections. Oral candidiasis is the least serious fungal infections that can affect people with HIV, it may be an indication that HIV is Worsening. Nutritional treatment is the best and easily accessible for the treatment of any disease. **Objectives:** To assess the effectiveness of Mixed fruit paste on Oral candidiasis among HIV patients. **Design:** Quazi experimental design where post test only control group. **Setting:** Catherine Booth Hospital, Kanyakumari District. **Participants:** Thirty patients undergone treatment on oral candidiasis, fulfilling the inclusion criteria were selected by purposive sampling technique. **Methods:** 15patients were control group and 15patients were experimental group. Only the experimental group patients received mixed fruit paste. Post test assessment done with assessment of WHO Oral Toxicity scale for both groups. **Results:** From the findings of the study can be concluded that highest percentage were females, the duration of illness is between 1-3 years. Overall difference in mean percentage for the areas of control and experimental group post test scores was 28.5%. Paired't' test score control and experimental group pre and post test was 1.784 and 6.205 at the level of significance (P) = 0.05. Unpaired't' test score was 2.641 at the level of significance (P) = 0.05 there is significant relationship in Mixed fruit paste. No significant association between the control and experimental group of post test scores and their demographic variables. **Conclusion:** Applying 'Mixed fruit paste' on Oral candidiasis among HIV patients reduces the level of Oral Candidiasis. Therefore, mixed fruit paste can be used as a safe and effective tool to help to reduce the oral candidiasis among HIV patients in their daily needs. **Clinical practice:** Mixed fruit paste can be given to the patients who are having Oral Candidiasis in HIV patients.

Key Words: Mixed Fruit Paste, Oral Candidiasis, HIV Patients, Effectiveness

Background and need of the study

The HIV/AIDS global epidemic which affects all countries and all population groups. About 95% of all HIV/AIDS infected people are living in developing countries which are having opportunistic infection. In that 45% of the total estimated mortality rates are with oral candidiasis, (**Journal of American Medical Association, 2016**).

Atlanta(2011), reported that number of HIV cases with opportunistic infection were estimated at that, in 2006 there were 48,600 new HIV infections with opportunistic infection in the United States (95% confidence interval: 42,400-54,700) In 2007 there were an estimated 56,000 new HIV infections with oral candidiasis (95% confidence interval 49,100-62,900) In 2008 there were an estimated 47,800 new HIV infections with oral candidiasis (95% confidence interval: 41,800-53,800) In 2009 there were an estimated 48,100 new HIV infections with candida Albican infection (95% confidence interval: 42,200-54,000).

India is one of the largest and most populated countries in the world with over one Billion inhabitants. Of this numbers atleast 5 million are currently living with oral candidiasis. According to some estimates India has a greater number of people living with oral candidiasis than any other region in this world. The crisis continuous to deepen as it becomes clearer that the epidemic is affecting all sections of Indian society, not just the groups such as sex workers and truck drivers that it was originally associated with, (**Robert giraloda 2009**).

Candidiasis of the mouth, or "oral thrush," infects the inside lining of the cheeks and the top and sides of the tongue. Oral thrush commonly occurs among children taking antibiotics and people with compromised immunity, like those with cancer, diabetes or HIV infection. "Fungal Infection: Diagnosis and Management" cites that over 90 percent of patients with full-blown AIDS, both women and men alike, suffer from oral thrush. MayoClinic.com relates that symptoms of oral thrush are light coloured, cheese-like lesions that can be painful, which make chewing and swallowing difficult. Oral thrush also produces sweet, but musty smelling breath, (**Mayo clinic, 2011**)

Treatment of oral thrush in HIV/AIDS patients with lemon juice and lemon grass were recommended. This was proved as to investigate the safety and efficacy of lemon juice and lemon grass (*Cymbopogon citratus*) in the treatment of oral thrush in HIV/AIDS patients. Of the 90 patients, 83 completed the study. Though the patient population was small, the use of lemon juice and lemon grass for the treatment of oral candidiasis in an HIV population was validated by the randomised controlled trial, (**Maree JE, Sibanyoni M.States, 2006**).

Thus various research studies appear to be evidence of a nutritional therapy to be treatment of oral candidiasis, and some says no. As the scientific studies don't clear up the argument, This study was selected the effect of mixed fruit paste on oral candidiasis.

STATEMENT OF PROBLEM

A Study to Assess the Effectiveness of Mixed Fruit Paste on Oral Candidiasis among HIV Patients at Catheriene Booth Hospital, Kanyakumari District.

OBJECTIVES OF THE STUDY

- To assess the level of oral candidiasis among HIV patients in control and experimental group before and after mixed fruit paste.
- To determine the effectiveness of mixed fruit paste on oral candidiasis among HIV patients in control and experimental group.
- To find out the association between post test scores of oral candidiasis among control and experimental group of HIV patient with their demographic variables.

HYPOTHESES

H₁ There is a significant difference in the effectiveness of mixed fruit paste on oral candidiasis among HIV patients in experimental group than control group.

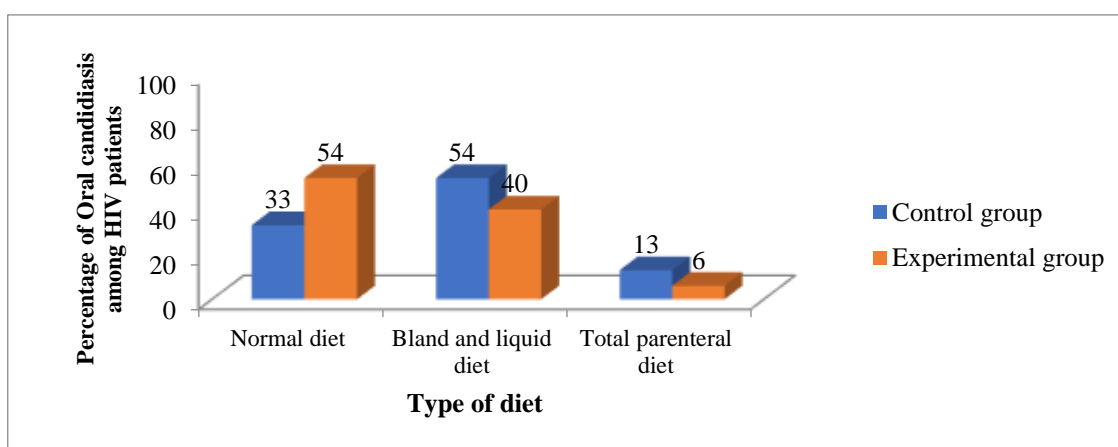
H₂ There is an association between the post test scores of oral candidiasis among control and experimental group of HIV patients with their demographic variables.

METHODS AND MATERIALS

This study conducted with quantitative evaluative approach and Quasi experimental design was carried on 30 Oral Candidiasis among HIV patients admitted in "Catherine Booth Hospital, Kanyakumari District" by using purposive sampling technique. WHO Oral Toxicity scale was used to assess the level of Oral candidiasis among HIV patients. The data was collected after obtaining the permission from the concerned authority of the hospital. Participants of this study were divides as control group and experimental group each group contain 15 members with oral candidiasis Pre-test was done by using "WHO Oral Toxicity Scale" to assess the level of Oral candidiasis. After the assessment of Oral candidiasis the "Mixed Fruit Paste" was applied on both the hard and soft pallet of the oral cavity about 200gms for 15-20minutes, two times per day for 7 days among experimental group and control group received routine care. Data analysis was done by using descriptive and inferential statistic and to be presented in the form of tables, graphs and figures.

FINDINGS AND DISCUSSION

Distribution of experimental and control group samples according to their 'Age group' depicts that in control group highest percentage 40% of patients were in the age group of '40-60 years'. In experimental group the highest percentage 47% were in the age group of '18-30 years', With regard to 'Gender', control and experimental group samples reveals that, the highest percentage (80%, and 53%) of patients were females in both the groups. according to their 'Educational status' shows that the highest percentage (54% and 60%) of the patients were in 'Primary high school and higher secondary'. samples according to their 'Duration of illness' shows that the highest percentage (40% and 53%) of the patients were in the duration



between 1-3 years in both the groups.

Fig.1: Bar Diagram showing the percentage distribution of Oral candidiasis among HIV patients according to type of diet.

Table 1: Frequency and percentage distribution of pre-test and post-test scores of Experimental group and Control group of Oral candidiasis among HIV patients

(N₁=15)

LEVEL OF ORAL CANDIDIASIS AMONG HIV PATIENTS	Control group			
	Pre-test		Post-test	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
Grade 0 (No tissue damage)	-		-	
Grade I (Mild tissue damage)	2	13.33	2	13.33
Grade II (Moderate tissue damage)	6	40	3	20
Grade III (Severe tissue damage)	4	26.6	5	33.3
Grade IV (Intolerable tissue damage)	3	20	5	33.3

Table 2: Frequency and percentage distribution of pre-test and post-test scores of Experimental group on Oral candidiasis among HIV patients

(N₂=15)

LEVEL OF ORAL CANDIDIASIS AMONG HIV PATIENTS	Experimental group			
	Pre-test		Post-test	
	Frequency (N)	percentage (%)	Frequency (N)	percentage (%)
Grade 0 (No tissue damage)	-		2	13.3
Grade I (Mild tissue damage)	2	13.3	6	40
Grade II (Moderate tissue damage)	6	40	3	20
Grade III (Severe tissue damage)	5	33.3	2	13.3
Grade IV (Intolerable tissue damage)	2	13.3	2	13.3

The effectiveness of Mixed fruit paste was tested by using paired “t” test and unpaired “t” test. Paired “t” test and unpaired “t” test was calculated to analyse the difference in pre and post test scores of Oral candidiasis among HIV patients in the control group and experimental group and post test scores of Oral candidiasis among HIV patients in experimental and control group.

LEVEL CANDIDIASIS AMONG HIV PATIENTS	“t” test		Table value	Level of significant (p)
	Paired ‘t’ test Value	un paired ‘t’ test value		
Control group (N ₁)	1.784	-	2.145	P<0.05 (NS)
Experimental group (N ₂)	6.205	-	2.145	P > 0.05 (S)
Control group and experimental group post test	-	2.641	2.05	P > 0.05 (S)

Unpaired ‘t’ test was calculated to analyze the effectiveness between experimental and control groups post test scores on Oral Candidiasis among HIV patients. unPaired ‘t’ test value was 2.64, when compared to table value (2.042). It is higher. It seems that “Mixed Fruit Paste” was effective on oral candidiasis among HIV patients,

Comparison of mean, SD and mean percentage of pre and post test scores depicts that in control group pre test, the mean scores was (2.53 ±0.63), which is 63.2% whereas in post

test, the mean score was (2.87 ± 1.06) , which is 71.75% on the level of Oral candidiasis. It shows the differences of 8.55%. Comparison of mean, SD and mean percentage of pre and post test scores of experimental group depicts that in pre test, the mean score was (2.46 ± 0.91) , which is 61.5% and in post test the mean score was (1.73 ± 1.2) , which is 43.5%. It shows the difference of 18.5%. It seems that, "Mixed fruit Paste" was effective in reducing the level of Oral candidiasis.

CONCLUSION

From the findings of the study it can be concluded that the highest percentage of patients were in the age group 18-30 years. Most of them were females. Majority of the patients had the education between primary and higher secondary. The highest percentage of patients on the duration of illness between 1-3 years. Most of them were under bland and normal diet.

- Mixed Fruit paste was highly effective on Oral candidiasis among HIV patients.
- There is a significant association between control and experimental group post test scores of oral candidiasis among HIV patients with their demographic variables.

Implications of this study

Nursing services

- This Mixed fruit paste can be used by the nursing personnel working in hospitals and clinical setting for reinforcing their practices.
- This method can be practiced in hospitals.
- This Mixed fruit paste can be demonstrated by all health care workers during the treatment of Oral candidiasis among HIV patients.

Nursing Education

- Nurse educator should educate the nursing professionals to prepare this Paste and find out the effectiveness.
- The researcher educates the staff nurses and students to prepare this paste for reduction of Oral candidiasis and improve it.

Nursing administration

- Nursing administrator can foster the use of 'Mixed fruit paste' as in clinical setting.
- Nursing administrator can organize conferences, seminars, and workshops for nurses working in the hospital to encourage a positive attitude on 'Mixed fruit paste' and to teach how to prepare and administer it.
- Nursing administrator can support the nurses for conducting research on various nutritional therapies.

Nursing Research

This study is a preliminary set up for exploring the concept of ‘Mixed fruit paste’ on Oral candidiasis among HIV patients. The result of this study encourages the nurses to adopt this as a part of nursing interventions in providing a holistic care to their patients.

RECOMMENDATIONS

Based on the findings of the study the following recommendations have been made for the study

- A large scale study can be carried out to generalize the findings.
- A comparative study can be undertaken to compare the effectiveness of mixed fruit paste with other complimentary therapies like other specified antifungal foods.
- A similar study can be carried out to identify the effectiveness of ‘Mixed fruit paste’ on other physiological variables such as cancer, respiratory infections.

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