

Relationship of Occurrence of Recurrent Aphthous Stomatitis in Removable Denture Users in the Biru Puskesmas UPT Tanete Riattang District, Bone District

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Abstract:- Recurrent Aphthous Stomatitis (SAR) is a disease of the oral cavity characterized by recurrent painful ulcers in the oral cavity that are oval in shape and surrounded by inflammation. This ulcer can be a single ulcer or more than one. One of the predisposing factors for SAR is trauma from using dentures. Dentures that can cause trauma are dentures that are less retentive as a result of which the teeth become loose when chewing and due to severe stress on the oral mucosal tissue. The purpose to determine the relationship between the occurrence of Recurrent Aphthous Stomatitis (SAR) in Removable Denture users at the UPT Puskesmas Biru. The method used in this research is Cross Sectional or cross section where data relating to independent variables or risks and dependent variables or impact variables will be collected for each research subject and only observed once. Results: the study showed that 90.9% of removable denture users had experienced SAR, where women were more likely to experience it compared to men, who used it at > 55 years of age, 48.39%. The duration of removable denture use is 45.16% for 1-5 years. Respondents who cleaned their dentures three times a day were 45.16%. Respondents used dentures continuously without removing them as much as 67.74%. The location of SAR that is frequently affected is 45.16% of the mucosa of the cheeks and lips. As many as 61.29% of respondents carried out treatment using self-medication when experiencing SAR. Conclusion: The use of removable dentures causes recurrent aphthosa stomatitis.

Keywords:- Recurrent Aphthous Stomatitis, Removable Denture.

I. INTRODUCTION

Losing teeth is a problem that can disrupt dental and oral health. Tooth loss can be caused by several factors such as periodontal disease, dental caries, trauma, impaction, orthodontic needs, hypoplasia, and severe attrition. Caries and periodontal disease are the most common factors and are found to cause tooth loss. Based on the National Health Research report, tooth loss at the age of 34-55 years is 0.4%, which increases at the age of 65 years and over by 17.6%.

Indonesian people generally use acrylic-based removable dentures. This denture has advantages from an aesthetic point of view because its base has a similar color to the oral mucosa, but on the other hand it has disadvantages as a result of the base material. Acrylic denture base material has porous properties because it has many pores and can absorb oral fluids. Its porous nature makes it easy for plaque to accumulate which can have an impact on the health of the mucosal tissue under the denture.

Users of removable dentures must continue to pay attention to the cleanliness of their dentures, especially in old age because at this age a person has experienced aging which usually experiences a slowdown in cognitive and psychomotor function and becomes less dexterous so it will be difficult to care for and maintain the cleanliness of the oral cavity. Good denture hygiene can support overall oral health and prevent further tooth loss. Removable dentures that are not clean enough can cause various negative impacts such as increasing plaque accumulation, causing inflammation, and easily causing recurrent aphthous stomatitis.

Recurrent Aphthous Stomatitis (SAR), known as apthae or cankersores, is a common oral disease. In Indonesia, ordinary people are more familiar with canker sores. The characteristics of this disease are characterized by the presence of recurrent, painful ulcers in the oral cavity that are oval in shape and surrounded by inflammation. This ulcer can be a single ulcer or more than one. SAR can attack the non-keratinized oral mucosa, namely the buccal, labial, lateral and ventral tongue mucosa, floor of the mouth, soft palate and oropharyngeal mucosa with clear boundaries and surrounded by erythematous halo.

II. METHODS

The type of research used in this research is Cross Sectional or cross-sectional where data relating to independent variables or risks and dependent variables or impact variables will be collected for each research subject and only observed once and measurements are made on the subject's character status or variables at the time of examination. This does not mean that all research subjects were observed at the same time.

This research was carried out at the UPT Puskesmas Biru, Tanete Riattang District, Bone Regency.

Presentation of the data used in this research is using a questionnaire sheet containing data on the characteristics of respondents, and a list of closed questions (answers are available

for selection). This research instrument was prepared by the researcher himself and had to test its validity and reliability first. The results of the questionnaire obtained will then be entered into a master table according to the group, then the results will be coded and entered into a computer program for data analysis testing.

III. RESULT

Respondents in this study were differentiated according to gender, age, length of use, frequency of cleaning dentures, how to wear dentures, location where SARs appeared and how SARs were handled.

A. Respondent characteristics

Table 1. Frequency distribution of SAR respondents based on gender.

Gender	Recurrent Aphthous Stomatitis				Total	
	(Ever)		(Never)			
	n	%	n	%	n	%
Male	8	88,89	1	11,11	9	100
Famale	20	90,9	2	9,1	22	100
Total	28	90,32	3	9,68	31	100

The data in Table 1 shows that the majority of respondents who had experienced SAR were female (90.9%).

Table 2. Frequency distribution of respondents based on age.

Age (Years)	Number (n)	Percentage (%)
25-34	1	3,22
35-44	3	9,68
45-54	12	38,71
> 55	15	48,39
Total	31	100

The data in Table 2 shows that the majority of respondents were > 55 years old (48.39%) of respondents.

B. Univariate Analysis

Table 3. Frequency distribution of respondents based on length of use of dentures.

Duration of use (Years)	Number (n)	Percentage (%)
< 1	5	16,1
1-5	4	13
5-10	9	29
> 10	13	41,9
Total	31	100

Data in Table 3 shows that the number of respondents who used removable dentures for >10 years was 13 respondents (41.9%)

Table 4. Frequency distribution of respondents based on the frequency of cleaning of dentures.

Denture Cleaning Frequency	Number (n)	Percentage (%)
1 time (a day)	0	0
2 times (a day)	7	22,58
3 times (a day)	14	45,16
> 3 times (a day)	10	32,26
Total	31	100

Data in Table 4 shows that most respondents (45.16%) clean their dentures 3 times a day.

Table 5. Frequency distribution of respondents based on how to wear dentures.

How to use	Number (n)	Percentage (%)
Continuously without letting go	21	67,74
Taken off while sleeping	10	32,26
Total	31	100

Data in Table 5 shows that there were 21 respondents (67.74%) who wore dentures continuously without removing them while sleeping and 10 respondents (32.26%) who took off their dentures while sleeping.

Table 6. Frequency distribution of respondents based on location of SAR appearance

Location of appearance of SAR	Number of Respondents (n)	Percentage (%)
Cheek mucosa	14	45,16
Lip mucosa	14	45,16
Tongue	3	9,68
Total	81	100

The data in Table 6 shows that based on the location of SAR appearance on the cheek and lip mucosa there were 14 respondents (45.16%) and on the tongue mucosa there were 3 respondents (9.68%).

Table 7. Frequency distribution of respondents based on how SAR is handled

How to Handle	Number of Respondents (n)	Percentage (%)
Left without medication	10	32,26
Self-medicate	19	61,29
To the dentist	2	6,45
Total	31	100

The data in Table 7 shows that 2 respondents (6.45%) were the number of respondents who treated SARs by going to the dentist, 19 respondents (61.29%), and 10 respondents who were left without medication (32). 26%).

C. Bivariate Analysis

Table 8. Correlation between the Occurrence of Recurrent Aphthous Stomatitis in Removable Denture Users at UPT Puskesmas Biru, Tanete Riattang District, Bone Regency

Duration of use (Year)	Number of Respondents (n)		Total	Sig. (2-sided)
	Yes	No		
> 1 year	3	2	5	0,039
15 years	3	1	4	
5 - 10 years	9	0	9	
> 10 years	13	0	13	
Total	28	3	31	

Based on table 8, it shows that the occurrence of recurrent aphthous stomatitis occurs mostly in patients with use over 10 years with a total of 13 samples and the lowest is in 1-5 years of use with a total of 4 people.

The significance of the knowledge variable is $0.039 < 0.05$, so it can be concluded that the use of dentures influences the occurrence of recurrent aphthous stomatitis in patients at the UPT Puskesmas Biru, Tanete Riattang District, Bone Regency.

IV. DISCUSSION

The large number of female respondents in this study shows that in the population studied there were many women who used removable dentures and had experienced SAR. The author believes that female respondents were found to use more dentures, because women tend to pay more attention to appearance than men. Using dentures is one way to improve your appearance from an aesthetic perspective. This is in accordance with the results of previous research which stated that women tend to prioritize aesthetics more than men. In this study, results were also obtained that the majority of respondents were in the age range < 55 years, namely 48.39% (Table 5.2). According to the author, many respondents in this age range have experienced tooth loss, because as a person gets older, their teeth will also become more susceptible to damage, because they are used or functioned more. This opinion is in accordance with the theory which states that the older you get, the more teeth you lose. This is caused by physiological changes in the tissue aging process which result in alveolar bone shrinkage and teeth that fall out easily due to alveolar bone resorption. On the other hand, this age group is still considered to be of productive age and requires good health and appearance to carry out activities.

An overview of the characteristics of respondents related to the length of time they have worn dentures shows that 41.9% have used dentures for >10 years (Table 5.3). The author believes that the length of time wearing dentures is a risk factor for recurrent aphthous stomatitis, as well as respondents who pay less attention to dental and oral hygiene.

The research results in Table 5.4 show that 45.16% of respondents (the largest) have the characteristics of cleaning their dentures 3 times a day. This shows that the majority of respondents already have good behavior regarding the frequency of cleaning the dentures they use. However, this cannot guarantee that oral hygiene conditions are in good condition, because oral hygiene is not only determined by the frequency of cleaning the teeth and mouth, including the dentures used. Dental and oral hygiene is also determined by the time of cleaning and the method of cleaning, in this case the brushing of the teeth. This opinion is supported by previous research conducted by Barbosa, which stated that the method (quality) of denture cleaning is more important than the frequency of denture cleaning.

Based on the data in Table 5.5, a description of the characteristics of respondents regarding how to wear dentures is obtained. As many as 67.74% of respondents wore dentures continuously without removing them, while only 32.26% of respondents took off their dentures while sleeping. The author believes that the majority of respondents do not know how to use dentures properly, which also influences the risk of recurrent aphthous stomatitis. This is in accordance with the theory which states that poor oral hygiene and continuous use of dentures without removing them can become a very vulnerable place for

the growth of microorganisms. Continuous use of dentures throughout the day without removing them can trigger stomatitis, which is often chronic atrophic candidiasis.

Recurrent Aphthous Stomatitis often appears in non-keratinized areas such as the cheeks, lips and base of the tongue. The research results in Table 5.6 show that the most frequently affected SAR locations were 45.16% in the mucosa of the cheeks and lips, while only 9.68% were on the tongue. Mechanical trauma such as the use of removable dentures can cause ulcers on the labial, buccal and lateral mucosa of the tongue.

Recurrent Aphthous Stomatitis can heal itself within 7-14 days without treatment. Many patients who suffer from SAR do not receive regular treatment to reduce the frequency of ulcer formation. The research results in table 5.7 show that 32.26% of respondents were left without medication when experiencing SAR. As many as 61.29% of respondents carried out treatment by self-medicating when experiencing SAR, while 6.45% of respondents received treatment from a dentist. This research shows that the majority of respondents care about their oral health, even though they self-medicate without going to the dentist.

Usually dentists provide advice on how to care and treat when patients control the installation of orthodontic devices. Therefore, patients do not have to go to the dentist when a minor trauma occurs that causes SAR. Some patients seek treatment to reduce the frequency of SARs and reduce pain. Even though SAR can heal itself within 7-14 days, it still hurts. However, the goals of treating SAR include managing pain and functional disorders by overcoming the inflammatory response and reducing the frequency of recurrence or preventing the emergence of new ulcers.

Table 5.8 shows that the longer the use of dentures at UP Puskesmas Biru, the greater the possibility of recurrent aphthous stomatitis. This is confirmed by the results of the SPSS chisquare test which showed a result of 0.039 <0.05 which shows that there is a relationship between the length of wearing dentures and the occurrence of recurrent aphthous stomatitis.

V. CONCLUSION

Research shows that the relationship between the occurrence of recurrent aphthous stomatitis in removable denture users mostly occurs in women who have experienced SAR with 20 (90.9%) respondents, with an age range of > 5 years, namely 15 (48.39%) respondents. Related to the length of time wearing dentures. showed that 41.9% had used dentures for > 10 years. It shows that 45.16% of respondents (the largest) have the characteristics of cleaning their dentures 3 times a day.

How to wear dentures: 67.74% of respondents wear dentures continuously without removing them. The most frequently affected SAR locations were 45.16% of the cheek

and lip mucosa and 61.29% of respondents received treatment by self-medicating.

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