Handling the Periodontal Disease in Community

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Dear Editor-in-Chief

Periodontal disease is dental health problem in the world. A chronic inflammatory disease affects the gum tissue and bone supporting the teeth. Periodontal disease becomes the public health problem because of its widespread; psychological, social and economic impacts in community, and considerable cost for the community (1). Despite great improvements in the oral health status of populations across the world, problems persist. Epidemiologic data available at WHO confirmed that periodontal disease prevalence and severity tend are high in older age group. This condition is more common in men than women (56.4% vs 38.4%), those living below the federal poverty level (65.4%), those with less than a high school education (66.9%), and current smokers (64.2%) (2). In Indonesia, the prevalence in every group of age is 96.58%. Periodontal disease has been indicated that as the main cause of tooth lose in adults over 35 years old (3,4).

There were three steps used in handling periodontal disease:

Step 1: Determination of causal factors
The causal factors included internal factors (poor oral hygiene 61%, low salivary hydration 55%, increased salivary viscosity 71%, acid salivary pH 46%), environmental factors (low income and education 63%, lack of dental promotion 98%, lack of dental service 52%) and behavioral factors (wrong time of brushing teeth 72%, bad habits

71%, poor diet 72.5%). The poor oral hygiene, the low salivary hydration, the increased salivary viscosity in acid salivary pH could be a good media for bacteria growth. It could make the mucous tissues dryer and decrease saliva self-cleansing's power. Mucous tissues protection became decrease so the toxin of bacteria could initiate them and severe the periodontal disease (5). This condition became severe due to poor behavior and environment. False time of brushing teeth could influence the accumulation of calculus. Besides, the low education and low income with poor dental health education would make the condition become more severe. These all-causal factors could be considered in planning treatment priority to this community

Step 2: Determination of treatment needs
CPITN (Community Periodontal Index of Treatment Needs) approach could be used in determination the treatment needs. CPITN examination was conducted according to WHO guidelines using the WHO CPITN – E probe (6). The treatment needs were categorized in four criteria: no treatment needs, oral hygiene instruction, prevention and complex treatment. The result could lead us for determination treatment priority for this community. For example, in this case study found that Oral Hygiene Instruction and prevention treatment were the most needed to the community. So, the aware-

ness of maintaining oral health must be raised by improving their knowledge of good oral health care. Besides, prevention action should be done such as removing the calculus by scaling, consuming good diet and sufficient water intake, increasing the consumption of fibrous and watery food.

Step 3: Planning the treatment priority
Using Priority Matrix Criteria, the priority treatments could be planned.

Table 1: Periodontal findings and treatment needs

Periodontal findings		Total sextants	Classification of periodontal findings	Total s extants	%	Treatment needs
Healthy	(H)	24	H	24	4.26	No Treatment Needs
Bleeding	(B)	17	B+ C+ P1 + P2	541	95.92	Oral Hygiene Instruction
Calculus	(C)	440	C + P1 + P2	524	92.91	Prevention treatment
Swallow Pocket	(P1)	73	P2	11	1.95	Complex treatment
Deep Pocket	(P2)	11				

Table 2: Alternative Problem Solution for the Community

No.	Alternative Problem Solution	Affectivity			Efficiency	Miv C	Priority
		M	I	V			
1	Oral Health Elucidation	5	4	4	5	16	I
2	Cadre training	3	2	3	2	9	II
3	Referral system improvement	2	2	3	2	6	III
4	Calculus cleaning / scaling	3	2	2	3	4	IV

There are four alternative problem solutions, which divided into 4 priorities: oral health elucidation, cadre training, referral system's improvement and calculus cleaning (scaling). Oral Health Elucidation became the prior alternative problem solution to improve the community's awareness and knowledge on maintaining good oral health care. This knowledge must be based on the findings of internal, environmental and behavioral factors. Along with it, cadre training must be formed from and for the community themselves by picked out of the community in order to develop community participation in maintaining dental health care. Puskesmas as health service institution has no ability to care all the population so cadres are needed to help them in promoting and preventing efforts. It also means that community does not only become the object of development but also become subject or partner. All the messages of health development could be delivered more effectively and efficiently (7).

These three steps of handling periodontal disease could help the community and health workers to find causal problems and plan solutions for community suffering periodontal disease.

Acknowledgement

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