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Body Alteration of Patients with Tuberculosis who Get Medication at the Public Health Centre

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Abstract

Patient with tuberculosis who already experience 6 months of treatment may felt body alteration. The study aimed to illustrate the body alteration of Tuberculosis patients who got medication at the Public Health Centre. The design of the study used cross sectional. The sample was 141 tuberculosis patients who got medication at the Public Health Centre in Blitar which was selected by simple random sampling. The variables were height, weight, urine color, feeling of bored related to the medication and willingness to stop taking the medication routinely. The data was collected at the patient's home on August - November 2018. The data was collected by instruments of height gauge, weights, and interview form. The data was analyzed descriptively. The results showed that most of the changes were in the physical such as the weight loss, the red urine, and nausea. The patient's nausea caused a decrease in intake and had an impact on the patient's weight that went down. It is important for nurses in Public Health Centre to provide medical services and information through health education before the first medication.

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INTRODUCTION

Eradication of tuberculosis in Indonesia has been launched since 2011 (Kemenkes RI, 2011), but positive new tuberculosis patients with x-rays and sputum examinations are always there. New patients received intensive medication at the Public Health Centre for a minimum of 6 months and periodically performed sputum examined as an evaluation. Patients with tuberculosis during medication at the Public Health Centre are given additional food that aims to maintain nutritional status and increase endurance during medication.

Tuberculosis patients feel weight losses every time measure their weight before taking medicine at the Public Health Centre. The weight and height are important measure to assess body mass index so that proper nutritional needs can be determined. Health worker always record in the patient's medical record, but never evaluate the physical and emotional alteration. Physical alteration and feelings of the patients due to medication also do not get the attention of health workers. Alteration that appear, for example thin body and feeling bored of taking medication. The purpose of the study was to illustrate the alteration in the body condition of tuberculosis patients who got medication at the Public Health Centre.

METHODS

The design of the study used cross sectional. The sample was 141 tuberculosis patients who received medication at the Public Health Centre in Kabupaten and Kota Blitar which was selected by simple random sampling. The variables were height, weight, urine color, feeling of bored related to the medication and willingness to stop taking the medication. The place of the data collection was at patients' homes on August – November 2018. The data was collected by instruments collection tools such as height gauges, weights, and interview forms. The data were analyzed descriptively.

RESULTS

The study results are presented at Tables 1 and 2.

Table 1 Characteristics of tuberculosis patients

Description	Age (years)	Height (cm)	Weight (kg)	BMI	Chest (cm)	Waist(cm)
Minimum	15	141	30	11.02	60	53
Maximum	87	177	78	31.64	96	92
Average	48.98	159.30	47.38	18.61	75.26	68.83
Standard deviation	16.43	7.38	8.49	3.16	7.26	7.24
Skewness	-0.02	-0.01	0.19	0.33	0.41	0.63
Kurtosis	-0.71	-0.77	0.67	1.38	0.23	1.51

Table 2 Body alteration of tuberculosis patients

No	Alteration and feelings of patient	f	%
1	Patient's perception of body condition:		
	a. Very thin	31	21.99
	b. Thin	99	70.21
	c. Normal	10	7.09
	d. Obese	1	0.71
2	BMI category:		
	a. Underweight	68	48.22
	b. Normal	71	50.35
	c. Overweight	1	0.71
	d. Obese	1	0.71
3	Urine color:		
	a. Red	116	82.27
	b. Not red	25	17.73
4	Nausea:		
	a. Yes	55	39.01
	b. No	86	60.99
5	Feeling bored the medicine:		
	a. Yes boring	16	11.35
	b. Not boring	12	87.23
	c. Not filling	32	1.42
6	Thinking to stopped of medication:		
	a. Yes want to quit	13	9.32
	b. Do not want to quit	126	89.36
	c. Not filling	2	1.42

DISCUSSION

The lowest age for tuberculosis patients was 15 years (Table 1) and had been living with the family. Four patients (2.84%) were adolescents aged 15-18 years and high school education, according to the guidelines of *Pengendalian Tuberkulosis di* Indonesia (Tuberculosis Control in Indonesia) (USAID, 2017; Zhang et al., 2017). The parents of the adolescent patients suffered tuberculosis three years ago and now already cured. This situation illustrates that the transmission easily occurs to family members. However, the prevention of transmission was also easy for families to do because families had five tasks in health, namely recognizing health problems, deciding to choose actions, caring for sick family members, modifying the environment for sick family members, and utilizing health care facilities (Suprajitno, 2004). The main task of families who had family members suffering from TB were preventing the transmission, increase the immune by immunization and providing adequate nutrition, creating an environment that can break the chain of transmission, and supporting patient care at the Public Health Centre (Ali & Katz, 2015; Kemenkes RI, 2017). The families task with family members suffering of tuberculosis are to recognize the symptoms of cough if not heal for two weeks, weight loss, night sweats, and reduced appetite (Hansson & Hansson, 2011). This task was in line with the role of protecting family members, namely preventing and medicating for tuberculosis patients, but family tasks need to be supported by knowledge and attitudes (Suprajitno et al., 2015; Yermi et al., 2018).

The analysis result (Table 1) illustrates that the body mass index of TB patients is normally distributed and there is no outliers, but platykurtic, so quantitative analysis can be continued (Hansson & Hansson, 2011; Velasco & Verma, 1998). The body mass index of tuberculosis patients is largely in the thin and normal category, according to the patient's perception of the body's own condition (Table 2) which is feeling very thin, thin, and normal. Perceptions about the body condition according to the patient's feeling that weight decreases. Body mass index and patient perceptions of body condition is not a barrier to medicated, although medication failure (death) occurred in patients who have underweight (Yen et al., 2016).

The interviews results about the nutrition given by the family to patients were quite adequate such as carbohydrates, vegetables, and proteins sourced from eggs, freshwater fish, beef, and chicken. The family statement was supported by the Public Health Centre nurse statement that every month they had been given additional protein meal in the form of canned milk from the Public Health Centre. The purpose of supplementary feeding was to maintain the patient's immune system during medication. The role of the family to prevent a decreased body mass index and prevent medication failure by providing adequate nutrition (Kemenkes RI, 2017; Samal, 2017).

During tuberculosis medication, the patient's urine becomes red and feels nauseous (Table 2). These changes are the effects of Isoniazid (INH), Rifampicin (RIF), Pyrazinamide (PZA), Ethambutol (Myambutol) (Disease Branch, n.d.). Urine discoloration and nausea had been realized by patients and families because they (patients and families) already had been received health education from the Public Health Centre nurses before medication (Suprajitno et al., 2018). They also got of health education about the families efforts to increase the patient's vitality by giving traditional herbal from the curcuma rhizome, which could increase lymphocytes (Dewi et al., 2014) and as bactericidal (Yumas, 2016). The family said that patients were also given ginger processed drinks every day to increase vitality.

Treatment received by tuberculosis patients cause boredom and thinking to stop of medication (Table 2). Such feelings and thoughts were caused by the medication which around 6-9 months. The patients who were not bored and did not think to stop the medication were larger than who were bored. The interview results from the patients who were bored and thought to stop the medication were patients which must be careful while behaving, for example when eating and drinking in the public area. Whereas, patients who were not bored and did not think to stop medication said that the disease needed to be treated and did not spread to people around or colleagues (Churchyard et al., 2017; Wulandari et al., 2015).

CONCLUSION

The body alterations which occurred were (1) most of the tuberculosis patient was the thinner body, the red urine, bored, nausea, and (2) a little of tuberculosis patients felt tired of taking medication and thinking of stopping the drugs.

SUGGESTION

The body alteration and feelings of the patients must become the concern of the Public Health Centre nurses who provide medication. Patients must be given health education before the first medication.

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