

CASE REPORT

Open Access

New Case of Tuberculosis Disease Management through Family Medicine Approach

Burhanuddin Bahas^{1*}, Rachmat Faisal Syamsu^{1,2}, Siska Ulandari²

¹Department of IKM-IKK, Faculty of Medicine, Universitas Muslim Indonesia

²Ibnu Sina Hospital, Makassar, Indonesia

*Corresponding Author. E-mail: siskaulandari17@gmail.com Mobile number: 08114618111

ABSTRACT

Tuberculosis is still a threat to public health in Indonesia. Based on WHO, TBC Report 2020, TBC Case in Indonesia in 2019 is estimated at 845,000 cases with the incidence of 312 per 100,000 population, so Indonesia be the second largest TBC cases of the world after India. The family's input approach provides holistic treatment by improving family functions.

The Primary data was obtained through anamnesis (Autoanamnesis), physical examination and home visits to assess the home condition and relation with the family. The secondary data were obtained from the patient's medical record in Hospital. Assessment is based on the holistic diagnostic. The result is presented in the case report. The patient who has a functional degree 1 with tuberculosis has an internal risk factor that does not pay attention to the initial complaints so the complaints increase weight, patient awareness efforts in avoiding risk factors and lack of knowledge of the disease. As for External risk factors are the lack of Family knowledge about the disease and home environment which is so close to the farm. Then do educate the patient and family about drugs that should he consume and eat right, side effect of the drugs and changes in his lifestyle. After the evaluation is compliance in taking medicine and do healthy lifestyle. The complex clinical activities take a long time and cooperation between health family workers. Where officers not only resolve the patient's clinical issues but also seek and provide solutions to problems - the problems in an environment affecting the health of patients and families.

Keywords: Family medicine approach; New case; Tuberculosis



GREEN MEDICAL
JOURNAL
E-ISSN 2686-6668

Article history:

Received: 10 July 2022
Accepted: 15 August 2022
Published: 31 August 2022

Published by:

Faculty of Medicine
Universitas Muslim Indonesia

Mobile number:

+62821 9721 0007

Address:

Jl. Urip Sumoharjo Km. 5, Makassar
South Sulawesi, Indonesia

Email:

greenmedicaljournal@umi.ac.id

Introduction

Tuberculosis is a respiratory disease caused by the bacteria *Mycobacterium*, which multiplies in parts of the body where there is a lot of blood and oxygen flow. Tuberculosis is a generative disease who has been outbreaks for a long period in the middle of Indonesia, which attacked the productive age group and children. (1) Tuberculosis is the major issue of public health in Indonesia. Based on WHO Global TBC Report 2020, the TBC case in Indonesia in 2019 is estimated at 845,000 cases with incidence of 312 per 100,000 population so Indonesia become the country with the second largest cases in the world after India.(2) three factors cause the increasing TB Prevalence in Indonesia, are the long period of TB treatment about (six to eight months) so the patients hard to recover because TB patients stopped treatment (drop) after feeling healthy even though the treatment process was not finished. In addition, TB issues are increased by the increased in the preventive HIV / AIDS infection and the emergence of TB-Multi Drugs issues Resistant (MDR, immune to various medicines). Another problem is the presence of a pattern of latent TB, which is the bacteria dormant in patient's body.(3)

The Family medicine approach is important because it does not assess a patient as a person but as a family unit that is healing and comprehensive. The doctor as the first door to be knocked by the sufferer in helping the TB patients, should always improve the service, one of which is often ignored is to provide education or health education. Health education to the patient and his family will mean a lot for sufferers, especially how attitudes and actions, and ways to prevent the transmission of disease.(4)

Case

A man 52 years old, who are domiciled at Jl.Tamanganga, Makassar comes to Ibnu Sina Hospital accompanied by his wife Patient come with cough 5 months ago. The cough did not stop even though the patient has eaten the medicine which is he bought at the pharmacy. When the patient coughs there is also a blood spot that came out with sputum. The cough is felt very often and heavy, sometimes it feels crowded when thepatient inhales. Patients also complain of often of sweating cold nights, the body feeling limp and dizzy, fever and decreased appetite. This hampers the patient's work as farmer after doing a sputum examination results of the patient is diagnosed as tuberculosis.

There is no History of the same disease before, patient forgot that has he ever had contact with a TB patient, the history of using an OAT was previously denied, the patient never consumed alcohol, but he always smoke 1 pack of cigarettes a day. The history there is a complaint of the same symptoms to other family members denied, Mr.A is a father living with his wife and mother. Since the diagnosis of TB patients has stopped working.

Currently, the complaints are felt only coughs and raging but it is rare. The Patients also feel there

is improvement during the treatment process and weight and appetite increase.

From the results of anamnesis and physical examination, obtained patients of the following patients:

1. A Clinical data

Patient complain of cough spurted with blood spotting since 5 months ago. The patient has taken drugs in the pharmacy but no improvement, Conferences of complaints continue, and interrupt patient activities. Patients wish to get recover and soon so he does activities without worrying the disease will return or eradicate.

2. Physical Examination

General examination; Awareness: Compos mentis; Temperature: 36,3°C.; Blood Pressure: 130/90 mmHg; HR: 80x/min, regular, strong pulse; the RR: 24x / min; Weight: 65 kg; height: 165 cm; IMT: 20.31

3. Generalist Status

Eyes, ears, and nose in normal limits. The throat mucosa is not hyperemic, Tonsil T1-T1, KGB neck is not palned. Regio Thorax: normal limits, the abdominal region is in normal limits.

4. Localist Status

Region of Thorak Posterior

I: Symmetrical, Scar (-), Tumor (-), the skin color is normal, intercostal retraction (-)

P: Pain Press (-), right freight-left

P: Sonor / Sonor

A: Vesicular (+ / +), Rhonki (+ / +) on the apex, Wheezing (- / -)

Region Thorak Anterior

I: Symmetrical, Scar (-), Tumor (-), the skin colour is normal, the retraction intercostal (-)

P: Pain Press (-), right freemitus = left, ictus cordis is not palpable

P: Sonor / Sonor, the heart limit within the normal limit

A: vesikuler(+ / +), Rhonki (+ / +), wheezing (- / -), bj i-ii regular, murmur (-), gallop (-)

5. Neurological Status

Normal physiological reflections and pathological reflexes (-). Motor and sensory examination of patients no abnormalities.

6. Supporting Examination

On BTA SPS examination obtained BTA +++

7. Family data

It is extended of the family, which is one house living three people. There is one sick person called Mr.A 52 years old with tuberculosis, his wife 45 years old, and the patient's mother 73 years old who

claimed never suffer from severe pain and never does medical check-up .There is a disruption to the a biological function that is interference in pulmonary function, family health behavior and home environment.

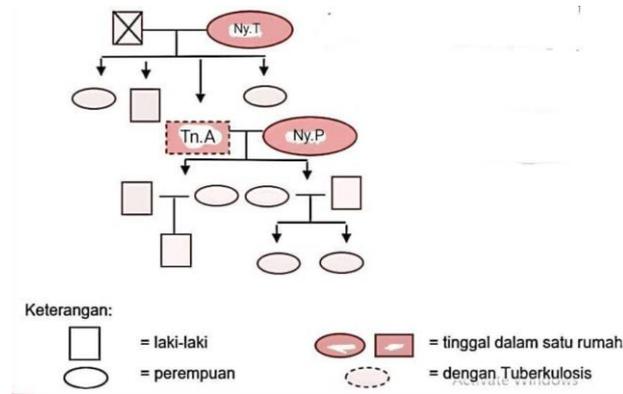


Figure 1. Family Genogram Mr.A

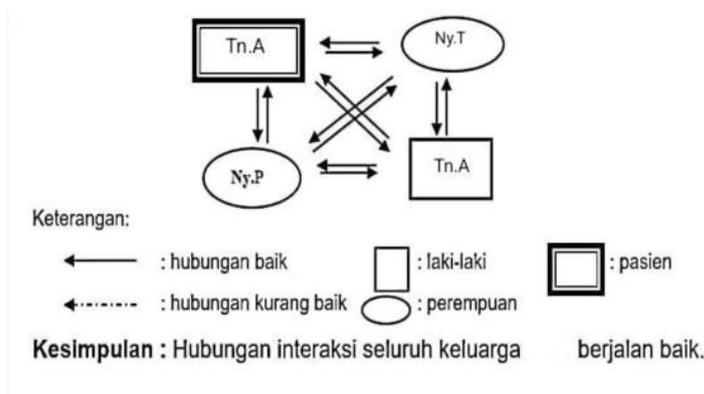


Figure 2. Family Interaction Relationship Mr.A

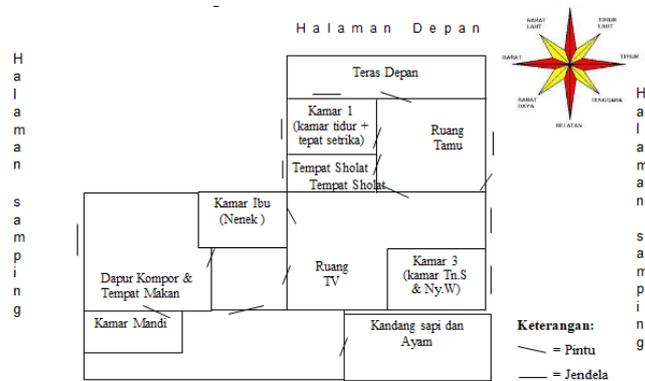


Figure 3. Home layout

Holistic diagnose

Clinical diagnose: New case Tuberculosis BTA +

Psychological aspect: Mr.A and His family realized that TB disease was experienced even though infected but could be cured. Mr.A and his family always listen to doctor's instructions well while the treatment.

Social and Economic aspects: Mr.A classified as middle economic and using Health BPJS as health insurance because it can be reached and access also affordable. The social interaction with his neighbors is quite good, he and his family often gather and do social activities.

Functional degrees: The functional degree obtained is one (1), which is capable of doing such a job before illness (no difficulty).

Management of:

Management in this patient is done by intervention of patients with families 3 times. The intervention given to these patients is education and counseling regarding the disease, prevention so that there is no complication in the patient center, family focus and community oriented.

1. Patient Center

Non Medicamentosa therapy

- a. Counseling on the importance of the preventive type of treatment compared to curative
- b. Counseling of TB Patient Disease
- c. Counseling to patients to perform routine controls if there is a complaint and take the drug to hospital if the drug run out
- d. Counseling to the patient to do medical examination after two months and six months of treatment
- e. Counseling to patients to eat nutritious foods in the form of high calories and high protein
- f. Counseling patients with side effects of drugs that arise like urination will become red, it only signifies the drug reaction. In addition, it can also arise itching and the head feels dizzy.

Medicamentosa Therapy

- a. OAT-FDC Tablet A day three times a day
- b. Vitamin B Comp

2. Family Focused

- a. Counseling on TB disease that can be contagious to other family members can be prevented by the use of masks, and not disposing of sparegrows (in WC /Boxed Garbage / Ashtray)

- b. Providing education to the family role play in reminding the patient to take medicine schedule.
- c. Education and motivation of the need for support of all family members to the patient
- d. Early determent of TB germs in families living with the patient.

3. Community Oriented

Counseling on prevention of Tuberculosis transmission and the people's effects around them in a community. Counseling is given about the disease of action taken by TB patients so as not to transmit to neighbors such as the use of masks and not disposal of sporegrows and maintaining the environmental cleanliness by distance away from the ranch with home.

Discussion

Tuberculosis is a respiratory disease caused by the bacteria *Mycobacterium*, which multiplies in parts of the body where there is a lot of blood and oxygen flow. Tuberculosis is a generative disease who has been outbreak of a long period in the middle of Indonesia, which attacked the productive age group and children. (1) Tuberculosis is the major issue of public health in Indonesia. Based on WHO Global TBC Report 2020, the TBC case in Indonesia in 2019 is estimated at 845,000 cases with the incidence of 312 per 100,000 population so that Indonesia become the country with the second largest cases in the world after India.(2)

In patients, sputum bacteriology examination is carried out with the results of the BTA SPS +++ examination, where the diagnosis of BTA pulmonary TB is positive when:

1. Two or more BTA sputum test results are positive, or
2. One BTA sputum test result is positive and supported by thoracic photo examination results according to the TB picture set by the clinician, or
3. One BTA sputum test result is positive plus a positive M. Tuberculosis culture result. The BTA SPS +++ interplay is found >10 BTA in one field of view. (3)

In human biology, the patient feels that the pulmonary TB disease he suffers from causes complaints that interfere with his activities. Patients who do not know that TB disease must regularly take medications and control it to health services. For this reason, patients are educated that pulmonary TB treatment must routinely take medications and control health services to find out the patient's clinical improvement, this is in line with the theory that pulmonary TB treatment must be regular and routine. (4) Psychosocial environment, patients feel happy with the current state of their family, the relationship between family members is also fairly close, and rarely experience a problem. (5) So that this can support the patient in undergoing treatment which can be seen by all family members providing support and being willing to be a supervisor of taking medicines. (6)

Economic aspects depend on patients as the backbone of the family working as breeders. Patients say that this income is enough to meet daily needs regarding health insurance the patient has BPJS insurance and patients often use it to carry out treatment for their illness. (7) (8)

In the home environment and patient relationships with neighbors around the house are intimately established, patients and families also participate in routine recitation activities organized by the surrounding environment. In this case, the patient has a good relationship with neighbors so that he can avoid psychosocial stress that can aggravate the patient's disease. The physical environment of the settlement is quite densely populated and the environment looks less clean and tidy, where near the patient's house there are buildings under construction. The patient's home environment also includes an environment with a lot of dust where the road is still dirt and many large cars pass through the road so that the patient's home environment is at risk of health problems, for this reason, patients are given education to continue wearing masks. The diet has not been following the recommendations of doctors, patients have not consumed high-calorie and high-protein foods. The patient prefers to eat what he wants without paying attention to the condition of the disease. (9) (10)

These media discuss TB disease ranging from causes, clinical symptoms, complications, management to prevention that can be done. In this case, it is emphasized how to transmit the disease, a healthy lifestyle in the form of correct and good physical activity, and not neglect in taking medicines for TB disease. Considering that patients also have families who are in direct contact with patients every day, and can be one of the risk factors for TB disease. This intervention is carried out to prevent the transmission of the disease to other family members, changing the patient's lifestyle in the form of wearing a mask always and throwing phlegm in its place, a high-calorie diet high in protein and regular exercise activities, as well as thinking patterns about TB disease although to change this is not something that can be seen results in a short period (11) (12)

There are several steps or processes before people adopt new behaviors. The first is awareness where people are aware of the stimulus. Then he begins to be interested, next the person will weigh whether or not the stimulus is good or not. After that he will try to do what he wants and adapt and behave according to his knowledge, consciousness and attitude. When the intervention is carried out, the family also participates in accompanying and listening to what the patient is saying. (13)

The education provided is in the form of a clean and healthy lifestyle, a clean home and environment, food that is high in protein and nutritionally balanced, the importance of taking medicine regularly and the impact that will occur if you do not take medicine, complications that will occur, avoiding factors that can aggravate the disease, how to transmit disease, and always wearing personal protective equipment (mask). (14) (15)

Conclusion

The Family medicine approach is important because it does not assess a patient as a person but as a family unit that is holistic and comprehensive. Mr.A diagnoses with new case tuberculosis, the treatment for TB patient besides management therapy the support of the family is also needed.

Conflict of Interest

There is no conflict of interest in this research

Founding sources

There is no funding sources

Acknowledgment

There is no acknowledgment

Reference

1. Kementerian Kesehatan Republik Indonesia. Surat Edaran Nomor HK.02.02/III.1/936/2021 tentang Perubahan Alur Diagnosis dan Pengobatan Tuberkulosis di Indonesia. Kemenkes RI, Direktorat Jenderal Pencegahan dan Pengendalian Penyakit. 2021. p. 3–5.
2. Zettira Z, Sari MI. Penatalaksanaan Kasus Baru TB Paru dengan Pendekatan Kedokteran Keluarga. *J Medula Unila*. 2017;7(3):1–12.
3. *BM IlMlul PEilMfiI | T mlnMI. :0–111.*
4. Sari PO, Ernawati T, Kedokteran F, Lampung U, Ilmu B, Komunitas K, et al. Penatalaksanaan Holistik Pada Pasien Tuberkulosis Melalui Pendekatan Kedokteran Keluarga Holistic Management of Tuberculosis Patients Through the Family Doctor ' s Approach. *Kedokteran*. 2020;10:1–10.
5. Ullah ANZ, Shrestha S, Malik AA, Roy T. Holistic Approach to Tuberculosis Detection, Treatment and Prevention: Emerging Evidence and Strategies from the Field. *Trop Med Infect Dis*. 2022;7(3):10–3.
6. Samal J. Family perspectives in the care and support of tuberculosis patients: An Indian context. *J Assoc Chest Physicians*. 2017;5(2):67.
7. Patel. 濟無No Title No Title No Title. 2019;01:9–25.
8. Program D, Rekam S, Kesehatan I, Kesehatan F. 1* , 2 , 3. 2021;8487(3):551–69.
9. Adane A, Damena M, Weldegebreal F, Mohammed H. Prevalence and Associated Factors of Tuberculosis among Adult Household Contacts of Smear Positive Pulmonary Tuberculosis Patients Treated in Public Health Facilities of Haramaya District, Oromia Region, Eastern Ethiopia. *Tuberc Res Treat*. 2020;2020:1–7.
10. Siregar RJ, Yusuf SF, Fernaldy D. The Relationship between Physical Conditions of the House and the Incidence of Tuberculosis. *Int J Public Heal Excell*. 2022;1(1):01–5.
11. Lucya V. Prevention of Tuberculosis: Literature Review. *KnE Life Sci*. 2021;2021:630–4.
12. Cintron C, Narasimhan PB, Locks L, Babu S, Sinha P, Rajkumari N, et al. Tuberculosis — Learning the Impact of Nutrition (TB LION): protocol for an interventional study to decrease TB risk in household contacts. 2021;1–13.
13. Aggarwal AN. *J Clin Tuberc Other Mycobact Dis* Quality of life with tuberculosis. 2019;17.
14. Lay KYY, Manurung IFE, Landi S. Stigma and Family Knowledge of Tuberculosis Patients at Naibonat and Oesao Health Center. 2020;2(3):140–6.
15. Mellors TR, Nasir M. Knowledge and Attitudes with Family Role in Prevention of Pulmonary Tuberculosis in Maros , Indonesia Knowledge and Attitudes with Family Role in Prevention of Pulmonary Tuberculosis in Maros , Indonesia. 2018;