CASE REPORT

Management of A Patient with Ankylosing Spondylitis Type Spondyloarthritis and Latent Tuberculosis Infection

Nadhya Allia[1], Lita Diah Rahmawati[2*]

[1]Department of Internal Medicine, Faculty of Medicine, Universitas Airlangga – Dr. Soetomo General Hospital Surabaya, Indonesia.
[2]Division of Rheumatology, Department of Internal Medicine, Faculty of Medicine, Universitas Airlangga – Dr. Soetomo General Hospital Surabaya, Indonesia.

ABSTRACT

Ankylosing spondylitis (AS) is one of the most common types of spondylarthritis (SpA), and Disease-Modifying Antirheumatic Drug (DMARD) is one of the modalities for treating the disease. An increased risk of latent tuberculosis infection (LTBI) reactivation in rheumatic patients receiving DMARD has been reported. Management of patients with rheumatic diseases infected with LTBI needs to be understood not to become active TB. We reported a case of a 57-year-old man with AS. Patient was planned to be treated with DMARD so that hepatitis and TB screening performed. It was discovered that this patient had LTBI. The prophylactic therapy for TB was given. DMARD therapy started one month after TB prophylactic therapy was given. For monitoring the disease progression, anamnesis, physical, laboratory, and radiology examination are performed regularly.

Keywords: Latent TB Infection, Ankylosing Spondylitis, Disease-Modifying Antirheumatic Drug

Correspondence: Lita Diah Rahmawati
E-mail: litasppd24@yahoo.com

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INTRODUCTION

Spondyloarthritis (SpA) is a group of chronic inflammatory rheumatic diseases characterized by pathophysiological, clinical, radiologic, and genetic abnormalities of inflammatory back pain with or without peripheral arthritis and with extra-articular manifestation. Ankylosing spondylitis (AS) is a type of SpA most frequently met in clinical experience. Clinical symptoms mainly include pain, joint stiffness, and missing in spinal mobility, which can cause dysfunction and decrease quality of life (van der Linden et al., 2013; Xu et al., 2017).

There is no specific data of AS prevalence in Indonesia, but, based on data from Riset Kesehatan Dasar data in 2013, it shows the prevalence of the rheumatic disease in 2007-2013 at age ≥15 years old to 30.3% in 2007 and decreased in 2013, 24.7%. Based on sex, the rheumatic disease tends to happen the woman with a prevalence of 34% (van der Linden et al., 2013; Badan Penelitian dan Pengembangan Kesehatan Kementrian RI, 2013).

Tuberculosis (TB) is a significant health problem globally and causes the death of 1.7 million people worldwide per year. Indonesia ranks second with the highest TB sufferers in the world, according to data from the WHO Global Tuberculosis Report 2017. Mycobacterium tuberculosis is estimated to have infected one-third of the world's population and, 90% of infected patients will experience latent TB infection (LTBI). If not appropriately treated, 5-10% of people who experience LTBI will become active TB (CDC, 2013; WHO, 2017).

Disease-Modifying Antirheumatic Drug (DMARD) is one of the SpA therapy modalities, especially for the rheumatic patient group that does not show improvements with other SpA therapy. However, the increased risk of reactivation of LTBI in rheumatic patients who get DMARD is widely reported worldwide. Therefore, it is necessary to understand the management of patients with rheumatic diseases infected with LTBI not be active TB (Smolen et al., 2013; Perhimpunan Reumatologi Indonesia, 2014).

We reported a case of a patient with spondyloarthritis ankylosing spondylitis type and latent TB infection.

CASE REPORT

A 57-year-old male, living in Sidoarjo, working as a private employee, married, Javanese, came to the Rheumatology Outpatient Clinic of Dr. Soetomo Hospital with a chief complaint of pain in the back and lower back since five months before admitted. From the anamnesis, it was found that there were complaints of pain in the back and lower hips for five months before, then progressively getting worse until the patient had difficulty walking for two months. The pain was also felt with a sense of stiffness. The pain and stiffness were mostly felt in the morning when he woke up for ± 1-2 hours in the morning. The stiffness was reduced when the patient moved his body. However, the

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patient still felt pain throughout the day.

Two months before, the patient felt that the complaints were getting worse. The patient found it difficult to sleep at night because of the pain. The patient also had difficulty walking due to pain in the lower back and soles of the feet. The patient spent his time in bed and used a wheelchair to change positions.

The patient was previously treated at a general practitioner and was said to have lower back pain for two months of SMRS. Patients were given Amitriptyline, Gabapentine, Braxidin®, Vometa®, Alprazolam, Lapibal®, and Recolfar®. However, after one month of treatment showed no improvement, the patient finally stopped using the drug.

The patient has had diabetes since ten years ago. The patient took Trajenta® 5 mg at night and Glimepiride 4 mg in the morning, but irregularly. The patient also suffered from high blood pressure, which was also known ten years ago. He routinely took 10 mg of Amlodipine in the morning. For diabetes mellitus and hypertension, the patient did not routinely go to the doctor. He only checked himself at home with automatic tensimeter and blood sugar checking devices owned by him.

The patient did not complain of coughing, fever, nausea, and vomiting. The patient also did not complain of cold sweats at night. The patient's appetite decreased for 5 months. The patient's body weight lost ± 5 kg in 5 months. Nobody had a long cough in the family. None of the patient's families had or was currently undergoing TB treatment. The patient never smoked or drank alcohol. He rarely drank coffee and never drank herbs.

On physical examination, the general condition was weak with Glasgow Comma Scale (GCS) of 456. Blood pressure was 140/80 mmHg, pulse was 90x/minute, regular and adequate pulse, respiratory rate was 20x/minute, axillary temperature was 36.5oC, with Visual Analog Scale (VAS) of 9. Body weight was 75 kg, and height was 175 cm (BMI 29.4). Head and neck examination did not reveal anemic conjunctiva, sclera jaundice, cyanosis, or dyspnea. There was no increase in jugular venous pressure and enlarged lymph nodes. Examination of the chest area of symmetrical movement, no retraction was found. On cardiac examination, a single S1 and S2 were obtained, regular, no heart sounds, gallop rhythm, or pericardial scraping sound. On pulmonary examination, there was a vesicular breath sound in both hemithorax, no crackles or wheezing were found in both lung fields. An abdominal examination revealed normal bowel sounds. On palpation, the abdomen felt soft (no muscular defenses). There was no tenderness. The liver and spleen were not palpably enlarged. Examination of the upper limbs revealed warm, dry, and red roots. There was no edema. There were no enlarged lymph nodes. Examination of the lower extremities also revealed warm, dry, and red roots. There was no edema. There were no enlarged lymph nodes.

From the localist status of rheumatological examination, it was found that the joints affected were the hip joints and the fingers of both hands. There was stiffness in the morning and pain in movement in the affected joint. The stiffness and pain were asymmetric—no subcutaneous swelling or nodules. Gait, Arms, Legs, and Spine (GALS) examination were performed. From Gait's examination, it was found that the patient had difficulty getting up from sitting because of pain in his pelvis. The patient came to the Rheumatology Clinic in a wheelchair. The Arms examination found tenderness in the PIP and MCP 2, 3, 4, 5 of the left hand and MCP 2, 3 of the right hand. There was no tenderness in both elbows and shoulders. Range of Movement (ROM) of both elbows and shoulders was within normal limits. Legs examination revealed limited flexion, extension, internal and external rotation in the right and left hip joints. Knee joint ROM was within normal limits. There was tendinitis in the Achilles tendon, plantar fasciitis on both feet, but no effusion was found in the lower extremities. Spine examination did not reveal limited ROM in the cervical and temporomandibular joints. There was limited ROM for right and left lateral flexion on examination of the dorsal spine. The occipital to wall test result was 2 cm, tragus to wall test was 10 cm, chest expansion test was 3 cm, and Schober test was 13 cm.

To assess disease activity, the Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) score used. The patient was assessed by the BASDAI score and was obtained a score of 7.

The results of laboratory examination were Hb 13.8 g/dL, leukocytes 10,440/mm3, platelets 233,000/mm3, MCV 84.9 fL, MCH 32.5 pg, MCHC 38.3 g/dl, neutrophils 62%, lymphocytes 24%, eosinophils 2.3%, HCT 36%, LED 12, BUN 6.2 mg/dl, creatinine 0.56 mg/dl, SGOT 21.6 U/L, SGPT 25.9 U/L, Total cholesterol 183, LDL 142, Triglycerides 107, GDP 121 mg/dL, GD 2 hours PP 175 mg/dL, uric acid 3.4. On urine examination, there were negative glucose, negative protein, negative ketones, negative bilirubin, negative nitrite, clear yellow color, erythrocytes 0-1/lp, leukocytes 0-1/lp, negative bacteria. The result of the abdominal ultrasound examination was within normal limits. The plain chest radiograph showed no abnormalities in the heart and lungs. The lumbosacral plain radiograph showed the presence of lumbar spondylosis and grade 2-3 sacroiliitis.

From the data above, the patient was diagnosed with ankylosing spondylitis type Spondylarthritis with Type II DM, and JNC VII stage II hypertension. Patients were given initial therapy 2x50 mg of cyclosporine, 90 mg of Etoricoxib at night, 12.5 mg of Amitriptyline at night, Vitamin B6 once a day, 5 mg of Trajenta® in the morning, 10 mg of Amlodipine once a day, and Cavit D3 once a day. Considering the severity of the pain and the patient's condition (BASDAI score 7), a biological DMARD was planned to be given to the patient. For this reason, the IFN-Gamma Release Assay (IGRA) test was planned to rule out latent TB infection and HBsAg and anti-HCV tests to rule out hepatitis virus infection.

Clinical Progression

During the second visit to the Rheumatology Clinic, the complaints of back pain were still being felt. The patient still could not walk for long. He was still wheeled to the front of the clinic door, then walked slowly up to the examiner's table. The physical examination showed blood

pressure of 130/70 mmHg, pulse of 90 x/minute, regular rhythm, adequate pulse, normal amplitude, respiratory rate of 20 x/minute, and axillary temperature of 36oC, with VAS of 7. The patient brought positive IGRA test result. In the absence of clinical symptoms leading to TB infection and normal chest radiograph result, the patient was diagnosed with latent TB infection. The patient was later diagnosed as ankylosing spondylosis type II diabetes mellitus, JNC VII stage II hypertension, and latent TB infection. He was planned to be given a biological DMARD. Therefore, the patient was given INH 1x300 mg as a prophylactic for TB infection before administering biological DMARD. Other therapies were continued. He was consulted with the Department of Pulmonary Disease for a pulmonary function examination.

At the third visit, the patient still complained of pain, especially at night, but the patient could get up from sitting and walking alone without assistance. He felt difficult to sleep at night because of the pain. From the physical examination, the blood pressure was 140/70 mmHg, pulse was 88 x/minute, regular and adequate pulse, respiratory rate was 20 x/minute, and axillary temperature was 36.3^{o}C, with VAS 5. Laboratory examination results were HBsAg Non-reactive and anti-HCV Non-reactive. The pulmonologist performed pulmonary physiology examination with the results of Vital Capacity 66%, FVC 68%, FEV1 67%, FEV1 / FVC ratio 78.7% with the conclusion that there were mild restrictions, no obstruction. From this examination results, he was diagnosed with ankylosing spondylitis type Spondylarthritis with Type II Diabetes Mellitus, JNC VII stage II hypertension, and Latent TB infection. Therapies were continued.

Next control, the patient was able to walk alone to the clinic. The pain was reduced, but he still had difficulty sleeping at night. The physical examination showed the blood pressure of 130/80 mmHg, the pulse of 86 x/minute, regular and adequate pulse, respiratory rate of 20 x/minute, axillary temperature 36.5oC, and VAS of 4. Laboratory examination results were GDP 182 mg/dL, GD 2 hours PP 227 mg/dL, and HbA1c 8.2%. From these data, the patient was diagnosed with an ankylosing spondylitis type Spondylarthritis with type II Diabetes Mellitus, JNC VII stage II hypertension, and Latent TB infection. For DM therapy, the patient was actually advised to use insulin, but he refused. He said that previously he did not regularly take diabetes medication. He was then asked to take all of the medicine regularly. For that, Glimepirid 1x4 mg was added to DM therapy. Another therapy was continued.

Seeing a good response to treatment using conventional DMARD, it was considered to continue the drug that had been obtained previously. If there was a worsening of the condition, a biological DMARD could be given after a month of taking TB prophylactic drugs.

DISCUSSION

Spondylarthritis (SpA), or another name Seronegative spondyloarthropathy, is a group of autoimmune diseases increasingly encountered in daily practice. The SpA is a group of several diseases with different manifestations but has some similar characteristics, namely peripheral arthritis, anterior uveitis, sacroiliitis, negative rheumatoid factor, with positive family history and generally positive HLA-B27. Diseases that included in the SpA group are Ankylosing Spondylitis (AS), Reactive Arthritis (including Reiter's Syndrome), Psoriatic Arthritis (PsA), Enteropathic Arthritis or Arthropathy related to Inflammatory Bowel Disease, and Undifferentiated SpA (van der Linden et al., 2013; Yan Yu et al., 2013; Fitzgerald, 2013; Wollheim, 2013).

In general, the prevalence of SpA in the population is not too large, making the awareness to diagnose this disease less. Various organizations have developed various diagnostic criteria. The most recent is the criteria from the organization of The Assessment in Spondylology International Society (ASAS) released in 2010 (Table 1). ASAS 2010 combines criteria for cases with axial and peripheral clinical manifestations. ASAS 2010 criteria are considered to provide the best sensitivity and specificity results compared to other criteria that have been developed previously (Rudwaleit et al., 2011).

Table 1. ASAS Classification Criteria for Axial Spondyarthritis (SpA) (in Patients with back pain ≥ 3 months and age at onset <45)

Sacroiliitis on imaging	OR	HLA-B27
plus		plus
≥1 SpA feature		≥2 other SpA feature
SpA Features		Sacroiliitis on Imaging
Inflammatory back pain		Active (acute) inflammation on MRI highly suggestive of sacroiliitis associated with SpA OR Definite radiographic sacroiliitis according to modified New York criteria
Arthritis		
Enthesitis (heel)		
Uveitis		
Dactylitis		
Psoriasis		
Chron's disease/ulcerative colitis		
Good response to NSAIDs		
Family history for SpA		
HLA-B27		
Elevated CRP*		

*Elevated CRP is considered a SpA feature in the context of chronic back pain. ASAS, Assessment of SpondyloArthritis international Society; CRP, C-reactive protein; HLA-B27, human leukocyte antigen-B27; MRI, magnetic resonance imaging; NSAIDs, nonsteroidal anti-inflammatory drugs.

The next step in the management of SpA is that in each case that has met the diagnosis of SpA, efforts are made to be classified into one of the SpA subgroups by looking at the various diagnostic criteria for each of these diseases (Perhimpunan Reumatologi Indonesia, 2014).

Ankylosing spondylitis (AS) is a subgroup of SpA that is frequently met in daily practice. The AS diagnosis can be made using the modified New York 1984 criteria (Table 2) consisting of clinical and radiological criteria. It is said that AS is definitive if the criteria for sacroiliitis are added with one of the clinical criteria (van der Linden et al., 1984).

Table 2. Modified New York, 1984

Criteria
1. Low back pain of at least 3 months' duration improved by exercise and not relieved by rest
2. Limitation of lumbar spine in sagittal and frontal planes
3. Chest expansion decreased relative to normal values for age and sex
4. Bilateral sacroiliitis grade 2 to 4
5. Unilateral sacroiliitis grade 3 to 4
Definite Ankylosing Spondylitis
Unilateral grade 3 or 4, bilateral grade 2 to 4 sacroiliitis and any clinical criterion

The patient came with complaints of pain in the back and pelvis for 5 months before admitted. He had difficulty walking and had difficulty sleeping at night because of pain. The pain was also accompanied by stiffness, especially in the morning when he woke up. The stiffness was felt in the back, lower hips, legs, and fingers of both hands. From this complaint, it can be concluded that the patient experienced back pain for more than 3 months. Low back pain in patients was an inflammatory low back pain characterized by pain that did not improve with rest, improves with activity, and there were periods of pain at night.

The physical examination and GALS examination results were arthritis in the hip joint and fingers of both hands. There was tenderness in PIP and MCP 2, 3, 4, 5 of the left hand, and MCP 2, 3 of the right hand. There was tendinitis in the Achilles tendon and plantar fasciitis on both feet. There was also limited ROM for right and left lateral flexion. The 2 cm occipital to wall test results, 10 cm tragus to wall test, 3 cm chest expansion test, and 13 cm Schober test showed spinal stiffness. Radiological examination revealed lumbar spondylosis and grade 2-3 sacroiliitis on the AP/Lateral lumbosacral radiograph. Based on the results of these examinations the patient was diagnosed with ankylosing spondylosis type spondylarthritis.

Recommendations for AS management refer to the 2006 ASAS/EULAR recommendations updated in 2010 and later in 2016. The main target of management is to optimize patients' quality of life through efforts to control symptoms and inflammation, prevent permanent structural damage, and improve social function/role of the sufferers (Braun et al., 2011).

According to the 2010 ASAS/EULAR recommendations, good AS management requires a combination of non-pharmacological and pharmacological therapeutic modalities. The 2010 ASAS/EULAR recommendations are summarized in 11 points: general management, disease monitoring, non-pharmacological therapy, observation of extra-articular and comorbid manifestations, use of selective and non-selective NSAIDs, use of analgesics, glucocorticoids, conventional DMARD, biological DMARD with therapy, anti-TNF, surgery, and attention to changes in the disease course (Braun et al., 2011). Whereas in the 2016 ASAS/EULAR, the latest recommendation is to consider slowly reducing the dose of biological DMARD in patients who have experienced continuous remission (van der Heijde et al., 2017).

DMARD or Slow Acting Anti Rheumatic Drug (SAARD) is a drug that can inhibit arthritis progression. Borrowing the concept of Rheumatoid Arthritis established, DMARD is also expected to reduce the inflammatory manifestations of SpA, maintain or improve body function, and prevent or decrease the level of structural damage. Drugs of this class will show their effect after 4-6 months of treatment and do not directly affect on relieving pain and inflammation, therefore while waiting for the action of these drugs, nonsteroidal anti-inflammatory drugs (NSAIDs) are usually given. Generally, in patients whose diagnosis has been confirmed with certainty, DMARD administration can be started immediately to control the disease's progression (van der Linden et al., 2013).

There are two types of DMARD, conventional and biological. Conventional DMARDs, such as methotrexate and sulfasalazine, are commonly used to treat SpA. Many studies have been conducted to determine the therapeutic effect of Sulfasasalazine, which was first proposed as a therapy for SpA, especially in the US in 1984. Sulfasalazine can treat spinal complaints, especially at an early stage. Methotrexate, cyclophosphamide, and azathioprine can also help although their efficacy has not been supported by clinical research (van der Linden et al., 2013).

For the use of biological DMARD, anti-TNF therapy should be given to patients with high and persistent disease activity and less responsive to conventional DMARD therapy. ASAS recommends anti-TNF for AS patients considering the patient's clinical condition and disease severity which can be assessed from the Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) score. A BASDAI score >4 indicates the use of anti-TNF in AS. There is no evidence to suggest the role of biological agents other than anti-TNF in AS management (Braun et al., 2011).

The patient was then given non-pharmacological and pharmacological therapy. For non-pharmacological therapy, the patient was given information and knowledge about the disease and asked to exercise regularly. Pharmacological therapy provided includes analgesics and DMARD. The severity of the patient's clinical condition and BASDAI score of 7 was planned to provide anti-TNF therapy as a biological DMARD therapy. He also got drugs to control Diabetes Mellitus and hypertension.

On the other hand, Mycobacterium tuberculosis is estimated to have infected one-third of the world's population, and 90% of infected sufferers will experience Latent TB Infection (LTBI). It is estimated that 5-10% of people who experience LTBI will develop into active TB if they do not get proper treatment (CDC, 2013).

One of the important factors that influence the development of the disease is the patient's immunological status. Immunologically, LTBI is a condition where there is a balance between the virulence of M. tuberculosis and the host immune system. If there is a decrease or disturbance in the body's immune system, reactivation of LTBI can happen (Cantini et al., 2015).

Giving DMARD can reduce the immune response so that it will increase the risk of TB reactivation. Research by Brassard et al. 2006 showed that the use of DMARD, both conventional and biological, was associated with an increased risk of TB infection. The risk of developing TB disease in patients receiving biological DMARD therapy with TNF-α inhibitors is 2-56 times higher than the usual population (CDC, 2013; Brassard et al., 2006).

Therefore, every patient exposed to DMARD needs to be screened for both active and latent TB infection (Figure 1). Screening for infection includes history, physical examination, chest X-ray, and other investigations as indicated. If it is proven that active TB is not found, then a further LTBI screening examination is carried out using the tuberculin test and the IGRA examination simultaneously. If this is not possible, then an IGRA examination can be done before tuberculin testing, or at least one examination should be done. Patients are diagnosed with LTBI if positive results are found on one or all of the specific LTBI screening tests (tuberculin and/or IGRA) (Inanc et al., 2009; Kementrian Kesehatan Republik Indonesia, 2014).

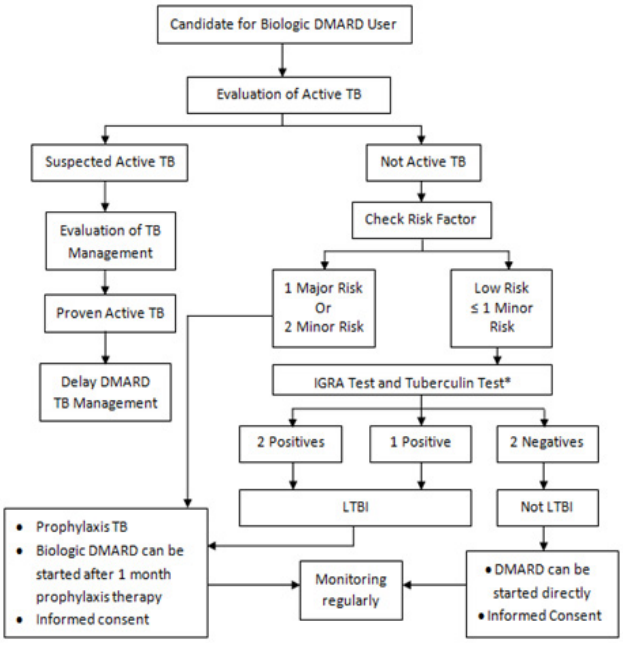

Figure 1. Algorithm of LTBI Screening for Biologic DMARD User

LTBI management includes non-pharmacological management, such as patient education and the adoption of a healthy lifestyle, and pharmacological management. TB prophylaxis/LTBI therapy with a 6-9 months isoniazid regimen and 12-combined doses of rifapentine and isoniazid have shown equivalent efficacy, but rifapentine is not currently available in Indonesia. Patients with LTBI are advised to receive TB prophylactic therapy for one month before receiving biological DMARD therapy (WHO, 2015; Ai et al., 2016).

The duration of DMARD administration is adjusted to disease activity and clinician decisions following each disease's guidelines. There are no recommendations regarding the discontinuation or adjustment of the dose of biological DMARD in the event of TB reactivation in patients (LTBI or not LTBI) while receiving biological DMARD therapy (Perhimpunan Reumatologi Indonesia, 2017).

Patients diagnosed with LTBI and are receiving TB prophylactic therapy, and biological DMARD therapy should be monitored regularly. Anamnesis and a targeted physical examination should be carried out at each visit, at least every 2 months. Chest X-rays should also be done every 6 months or if there is clinical suspicion. Monitoring of patients who have been proven to have LTBI aims to screen for reactivation of LTBI. Repeated tuberculin skin testing and IGRA are not recommended because they will not help in the diagnosis of TB (Iannone et al., 2014).

With proper prophylactic therapy in LTBI, TB reactivation can be prevented with an efficacy range of 60-90%, while screening and prophylactic testing of TB in LTBI patients before using biological DMARD anti-TNF α class has been shown to reduce the incidence of TB reactivation by 78% (Iseman, 2011).

The patient was planned to get biological DMARD for that screening for TB and hepatitis infections performed. For hepatitis infection, the HBsAg and anti-HCV results showed non-reactive results. For TB infection, his history did not show any signs of active TB infection. Chest X-rays showed that heart and lung were normal. Based on the LTBI screening algorithm, the examination was followed by a tuberculin skin test and/or IGRA test. The patient was tested for IGRA, and a positive result was obtained. The patient then got a TB prophylactic regimen, INH 1x300 mg for 6 months. Biological DMARD itself can be given after 1 month of TB prophylactic therapy.

Apart from giving biological DMARD, patients with AS themselves have the risk of decreasing the immune system so that LTBI can be reactivated into active TB infection. Therefore, periodic monitoring of patients is carried out. The patient should control every month. Anamnesis was carried out at each visit, laboratory examinations every 2 months, and a chest X-ray examination was planned every 6 months (van der Linden et al., 2013).

The prognosis for AS disease itself is diverse, from self-limited courses to a mild-moderate course. Life expectancy generally falls after 10 years of the disease. A study in Finland found data on the increase in mortality by up to 50% compared to controls, with the cause of death from complications of diseases such as amyloidosis or spinal fractures, and other diseases including cardiovascular, gastrointestinal, and renal diseases. Another problem that stands out is the complication of disability or decreased body functions, which will reduce workability and productivity (van der Linden et al., 2013).

After 3 months of therapy at Dr. Soetomo Hospital, the patient showed clinical improvement. He can walk alone without assistance. He still felt pain, especially at night, but it was much less than before treatment. He also adhered to taking the medications given and followed all examination procedures for periodic monitoring. The patient had received prophylactic therapy for TB infection so that if therapy was needed with biological DMARD, the patient was ready to receive it. The patient told to control routinely for monitoring the disease progression.

CONCLUSION

Ankylosing spondylitis (AS) is the most common types of spondyloarthritis (SpA) and, like another rheumatic disease, it will reduce the body's immune system. Latent tuberculosis infection (LTBI) is a condition where there is a balance between the virulence of M. tuberculosis and the host immune system. If there is a decrease or disturbance in the body's immune system, reactivation of LTBI can happen. Disease-Modifying Antirheumatic Drug (DMARD) is one of the modalities for treating AS. However, an increased risk of LTBI reactivation in rheumatic patients receiving DMARD has been reported. Therefore, every patient exposed to DMARD needs to be screened for both active and LTBI. TB prophylaxis therapy should be given at least 1 month before starting DMARD therapy. Patients who have been diagnosed with LTBI and are receiving TB prophylactic therapy and biological DMARD therapy should be monitored regularly.

CONFLICT OF INTEREST

The author declare there is no conflict of interest of this study.

REFERENCES

Ai JW, Ruan QL, Liu QH, Zhang WH. 2016. Updates on the risk factors for latent tuberculosis reactivation and their managements. EmergMicrob Infect.2016:5:h.1-8

Badan Penelitian dan Pengembangan Kesehatan Kementrian RI. 2013. Epidemilogi Penyakit Reumatik. Epidemiologi Penyakit di Indonesia. Jakarta: Balai Pustaka

Brassard P, Kezouh A, Suissa S. 2006. Antirheumatic Drugs and the Risk of Tuberculosis. Clin Infect Dis 2006;43:717-722

Braun J, van der Berg R, Baraliakos X, Boehn H, Burgos-Vargas R, Collantes-Estevez E, et al. 2011. 2010 Update of the ASAS/EULAR recommendations for the management of ankylosing spondylitis. Ann Rheum Dis 2011;70:896-904

Cantini F, Nannini C, Niccoli L, Iannone F, Delogu G, Garlaschi G, et al. 2015. Guidance for the management of patients with latent tuberculosis infection requiring biologic therapy in rheumatology and dermatology clinical practice. Autoimmun Rev, 2015;14:h.503-9

CDC. 2013. Latent tuberculosis infection: a guide for primary health care providers. Atlanta: Centers for Disease Control and Prevention

Fitzgerald O. 2013. Psoriatik arthritis. In: Firestein GS, et al. (eds) Kelley's Textbook of Rheumatology. 9th ed. Philadelphia: Saunders Elsevier, 2013. pp. 1401-1419

Iannone F, Cantini F & Lapadula G. 2014. Diagnosis of latent tuberculosis and prevention of reactivation in rheumatic patients receiving biologic therapy: international recommendations. J Rheumatol, 2014;91:h.41-6

Inanc N, Aydin SZ, Karakurt S, Ataqunduz P, Yavuz S et al. 2009. Agreement between Quantiferon-TB gold test and tuberculin skin test in the identification of latent tuberculosis infection in patients with rheumatoid arthritis and ankylosing spondylitis. J Rheumatol;36:12:h.2675-81

Iseman MD. 2011. Mycobacterial infections in era of modern biologic agents. Am J Med Sci, 341:h.278-80

Kementrian Kesehatan Republik Indonesia. 2014. Pedoman nasional pengendalian tuberkulosis. Jakarta: Kemenkes RI; 2014

Perhimpunan Reumatologi Indonesia. 2014. Rekomendasi Perhimpunan Reumatologi Indonesia (IRA) untuk spondiloartropati. Jakarta: Perhimpunan Reumatologi Indonesia; 2014:h. 2-3

Perhimpunan Reumatologi Indonesia. 2017. Pedoman Penapisan dan Tata Laksana Infeksi Tuberkulosis Laten pada Pasien Penyakit Reumatik yang Akan Mendapatkan Terapi DMARD Biologik. Jakarta: Perhimpunan Reumatologi Indonesia; 2017:h.11-12

Rudwaleit M, van der Heijde D, Landewe R, Listing J, Akkoc N, Brandt J, Chou CT, et al. 2011 The Assessment of SpondyloArthritis international Society Classification kriteria for peripheral spondyloarthritis and for spondyloarthritis in general. Ann Rheum Dis 2011;70:25-31

Smolen JS, Landewe R, Breedveld FC, Buch M, Burnester G, Dougados M. 2013. EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease-modifying anturheumatic drugs: 2013 update. Ann Rheum Dis. 2013;0;h.1-18.

van der Heijde D, Ramiro S, Landewe R, Baraliakos X, van den Bosch F, et al.,2017. 2016 update of the ASAS-EULAR management recommendations for axial spondyloarthtritis. Ann Rheum Dis 2017;76:978-991

van der Linden S, Valkenburg HA, Cats A. 1984. Evaluation of diagnostic criteria for ankylosing spondylitis: A proposal for modification of the New York kriteria. Arthritis Rheum 1984;27:361-8

van der Linden SM, van der Heijde D, Maksynowych WP. 2013. Ankylosing spondylitis. In: Firestein GS et al. (eds) Kelley's Textbook of Rheumatology. 9th ed. Philadelphia: Saunders Elsevier, 2013. pp. 1366-89

WHO. 2017. Global Tuberculosis Report 2017. In: www.who.int/tb/data

WHO. 2015. Guideline on the management of latent tuberculosis infection. Geneva: World Health Organization

Wollheim FA. 2013. Enteropathric arthritis. In: Firestein GS, et al. (eds) Kelley's Textbook of Rheumatology. 9th ed. Philadelphia: Saunders Elsevier, 2013. pp. 1420-1439

Xu Z, Xu P, Fan W, Yang G, Wang J, Cheng Q, & Yu M. 2017. Risk of infection in patients with spondyloarthritis and ankylosing spondylitis receiving antitumor necrosis factor therapy: A meta-analysis of randomized controlled trials. In: Experimental and Therapeutic Med 14: 3491-3500

Yan Yu DT, McGonagle D, Marzo-Ortega H, van den Bosch F, Leirisalo-Repo M. 2013. Undifferentiated spondyloarthritis and reactive arthriti. In: Firestein GS, et al. (eds) Kelley's Textbook of Rheumatology. 9th ed. Philadelphia: Saunders Elsevier, 2013. pp.1390-1400