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Introduction to leprosy, including the oldest disease, the Indian word leprosy kusta, known as kusta, was known as 1400 BC. Leprosy is a disease that is very feared by the public because it often leads to injuries in the body, especially parts of the leg. Leprosy or leprosy is a disease caused by Mycobacterium leprae including acid-resistant gram-negative bacteria. Mycobacterium leprae is not too many sufferers today, but in some areas in Indonesia M leprae can still be found. The purpose of writing this paper is to provide the results of the author's self-denial of leprosy, which contains epidemiology, etiology, pathogenesis, clinical symptoms, examination, appeal diagnosis, treatment and treatment and prognosis of leprosy. Leprosy epidemiology is an infectious disease that, although still widespread, especially in developing countries, is endemic to the disease worldwide, with the exception of Antarctica. In America only Canada and Chile have ever been found endemic to leprosy. There are very few cases of leprosy in southern Europe. The highest number of cases of leprosy has been reported in some parts of the Pacific islands, such as India. India is the second country that has the highest rate of leprosy.3 Cases of leprosy or leprosy worldwide have declined by about 90% in 20 years due to health programs. WHO figures show that 220,000 cases were reported in 2006. Who has the goal to eliminate M. leprae in the next decade, although there are still many lepers.4 Most patients are infected as children where the sick live with lepers. Males or women who leper in children are equally large, but in adult men are more likely to be exposed to leprosy. Poor hygiene increases the risk of transmission from mycobacterium leprae. Leprosy can only be transmitted by patients whose leprosy phase.1.2.3,4 leprosy transmission is currently unknown only on the basis of the classical assumption that it occurs through direct contact between old and close skin. The second assumption is inhalation, because M leprae can survive in a drop of several days. Period leprosy shoots vary greatly from 40 days to 40 years, usually 3-5 years.1 Until recently leprosy has only ever been found to infect humans, and has been reported on wild armadillo. It is also difficult to reproduce m leprae. M leprae can not be bred with the help of artificial environment or cellular reproduction, can grow only on the mice of the foot and armadillo.1 Leprosy is not a hereditary disease. Germ can be found in the skin, hair follicles, sweat glands and breast milk, rarely found in urine. Sputum may contain a lot of M leprae derived from the upper respiratory tract. Implantation sites are not always the site of the first defeat. As mentioned above leprosy can affect all ages of both children and adults. In Indonesia, children under the age of 14 ± 11.39%, but children under the age of 1 are rare. Currently, when registering patients under the age of 1, it is important to look for the possibility of contal leprosy. The highest incidence of leprosy occurs in people aged 25-35 years.1 Leprosy is also common in people with low socioeconomic, according to the study, the lower the socioeconomic will be the heavier the disease, on the contrary, the higher the socioeconomic state of the diet will help healing. In addition to the study there were differences in reactions to M leprae infection, leading to a clinical pattern in different ethnic groups. It is believed that this is caused by various genetic factors.1 Leprosy is a terrible disease and is feared because it can occur ulcers, mutilation and deformities. Lepverized people suffer not only from the disease, but also because they are ostracized by surrounding communities. This is due to irreversible serious nerve damage in the face and limbs, motor and sensory, and anesthesia accompanied by paralysis and muscle atrophy.1 Etiology of microbes cause leprosy is mycobacteria leprosy. M leprae is an acid-resistant basil 4 - 7 microns and 0.4 m wide. In order for the body to need a minimum amount of M leprae in the injection site, but the maximum amount does not mean an increase in reproduction. The vaccination in mice that was taken by Timothy followed by radiation of 900 p, so the loss of the cellular immune response will result in germ-filled granulomas especially in relatively cold parts of the body, namely the nose, ear cups, legs and tail. The embryo can be vaccinated again, meaning it meets one of Koch's postulates, although it is not yet fully executed. In fact M leprae has low pathogenicity and invading power because sufferers who contain more microbes of course, give more severe symptoms, may even vice versa. The imbalance between the degree of infection and the degree of the disease is not caused by another immune response, which stimulates the onset of local and careful granulomas that can be cured or progressive. Therefore, leprosy can be called an immunological disease. Clinical symptoms are more comparable to the rate of cellular response than the iticity of infection.1,3 It was little understood about the difference in reactions from M leprae in different people. Chromosome 10p13 is a locus containing code from the mannose C receptors, which plays an important role in the spiller recation M leprae. In general, leprosy is found to be associated with HLA-DR2. Clinical Symptoms When m leprosy microbes enter the human body may experience clinical symptoms depending on the vulnerability of the person. The form of clinical type depends on the cell system of the patient's immunity (SIS). If the SIS is good it will appear a clinical picture to tubers, and if the condition of the SIS is low it will give a review of lepromatosa.1-4 Type I (indefinite) is not included in the spectrum. TT is a type of polar tuber that is 100% tubers is a stable type. This means that you can't change the type. Similarly LL is a type of polar leupromatosis, which is 100% lepromatosa, is also a stable type and is unlikely to change any more. Although the type between Ti and Li is called borderline type, this means a mixture between tubers and lepromatosis. BB is a type of campurang consisting of 50% tuberculosis and 50% lepromatosa. BT and Ti have more tubers, while BL and Li have more lepromatosa. These are mixed types of the same type, meaning they may be free to switch types, either in the direction of TT or in the direction of LL. Areas of the leprosy spectrum according to different classifications can be seen in the table below. Table 1. The area of the range of leprosy according to the various classifications of Ridley Leprosy Spectrum zone and Jopling TT BT BT BB BL Madrid Tuberculoid boundary Lepromatosa WHO Pausibasiler (PB) Multibasiler (MB) Puskesmas PB MB Multibasiler means to have many microbes, namely type LL, BL and BB. While pausibasiler means complaining about a small microbe, namely the tip of TT, BT and I. Some comparisons of these types can be seen in the table below table 2. Clinical Review, Bacteriological and Immunological Leprosy Multibasiler (MB) Properties Lepromatosa (LL) Bordelin Lepromatosa (BL) Mid Boundary (BB) Defeats: - Form - Number - Distribution - Surface - Limits - Macular Anesthesia Penetrate diffuse Papul Nodus incalculable, virtually no healthy skin symmetrical smooth Obscure Dome-shaped board (dome) Punched-out can be counted, healthy skin is obviously asymmetrically rather rough, somewhat flashy Pretty Clear Clearer BTA - Skin Lesions - Nose Highlights Many (Without a Globe) Bannyak (Without a Globe) Many Usually Negative Multiple Negative Lepromin Tests Usually Negative Table 3. Clinical, Bacteriological and Immunological Review of Leprosy Poisibasiler (PB) Tuberculosis Properties (TT) Bordelin Tuberculoid (BT) Uncertain (I) Injuries - Forms - Amount - Distribution - Surface - Limits - Macular Anesthesia Only, Maxula Limited Penetration One, may be some asymmetrical dry scaly Clear Clear Clear Macular limited penetration: penetrate only a few or one with satellites Still asymmetrically dry scaly Clear Only macula One or some subtle variations, somewhat shiny Can be clear or may be obscure No to obscure BTA - Skin lesions are almost always negative or only 1 Usually a negative test of lepromin Positive strong (3 ) Positive weak can be positive weak or negative leprosy Uncertain is mild palin leprosy where only very small or limited affects the nerves and skin. There are very few bacteria found and with lepromin tests often give only weak positives. Under the microscope you can see that inflammation is minimal and not typical. Leprosy indeterminate is often only on one part of the body as an imptomatic, in the form of hypopigmentation of macula with a diameter of several cm. Indefinite leprosy is often found on the face, back, surface of extensor limbs. In multiple lesions, the spread is not symmetrical. The sensation of the skin can be slightly reduced, but the function of the sweat glands is still normal. Nerve thickening is usually found in only one nerve.5 Lepromatic leprosy is a leprosy characterized by a progressive infection of M. leproe, where many bacteria are found in skin lesions. Skin lesions are usually asymmetrical, small, glowing and confluence. Plaq penetrate has an insole limit with a brown-red color, which often varies depending on the color of the patient's skin. Often exposed faces are infiltration on the front of the head, chin, nose and ears, which often lead to deformities on the face called leonine facies (lion's face). Another common sign is madaros. With the development of anesthesia, the disease and dry skin will also worsen. Warm areas of the body will be spared, such as thought, groin, perineum and parts of the scalp. The nasal mucosa is almost always affected by the part. Chronic nasal abnormalities such as hemorrhagic are common in lepers in the endemic area. Attack of M. Lepra the nose interferes with the respiratory process and damages the nasal septum and leads to the loss of the nose of its substance (the nose of the clover leaf). Other mucous membranes such as lips, mouth and larynx can also be

penetrated from M leprae. Infiltration can also get into the eyes in the conjunctiva, cornea and ciliary body.5 Damage to the peripheral nerve usually appears over a long period of time. Damage to the peripheral nerve initially affects the sensory nerve and is usually ismetris in the spiller section. The sensory loss then slowly spreads to the middle part of the body. Pain is rare due to the infection of M leprae sensory nerve. The vegetative nerve is also exposed to a noticeable loss of function from sweat glands and vasomotor abnormalities of peripheral blood vessels. In lepromatous leprosy, exposure to large motor nerves is more common than tubular leprosy. In severe lepromatous conditions it can lead to lower arms and legs, due to osteoporosis with compression fractures. The absence of involuntary trauma of the patient and secondary infection can also lead to disability. Some patients have lymphedopathy. Infiltration can sometimes be found in the testicles, which can lead to infertility and gynecomastia.5 Tuberculoid lepra is a leper that occurs with a low amount of lepers in the body and the state of the cell immune system of the patient's body is still a good body. Nerve damage also occurs, but is not systemic. The lesions that occur are usually asymmetrical, small in quantity, and spread very slowly. Originally it was red or whitish red, and was a macula or papules. It slowly expands, with firm borders, and shows a clear middle with smooth, scaly atrophy and hypopigmentation. Addition lesions in the buttocks, back, face and limbs of extensors. Loss of sensitivity, anhidrosis and hair loss also occur. Inflammatory pellets will damage the peripheral nerves as a result of the loss of such nerve function. Sensory malfunction is an early neurological disorder that can lead to paralysis and eventually lead to muscle atrophy. Damage to the facial nerve can also occur and lead to facial expression disorders where the face becomes inexpressive or Antonin facies. Paralysis in the vocal muscles is also the most severe problem with tubular leprosy, when nerve damage reaches into the part of the nerve that moves the limbs. The affected nerve is a more superficial nerve and is easily exposed to injuries. Nerve damage can affect N. ulnaris and N. medialis, leading to lateral and medial claws of the hands. In the leg, if affected the shed peroneal will lead to oneive leg drop and when it hits the nerves The rear will fly anesthesia on the soles of the feet. As a result of nerve damage can lead to dry skin, a healing process that does not function properly, muscle paralysis, the response to minor injuries. In this situation, if there is a slight injury such as stepping on a stone, or even due to a thermal skin injury, the patient will not feel anything, so it can cause a lot of damage. According to WHO data in 1981, leprosy is divided into multibaciers and pausibasilers. The type of multi-baser includes type LL, BL and BB in the Ridley-Jopling classification with a bacterial index (IB) of more than 2 , while pausibasiler is type I, TT and BT with IB less than 2'1 In the interest of treatment in 1987 have changed. What is meant leprosy PB leprosy is to leprosy with a negative BTA to examine damage to skin tissues, namely type I, TT and BT according to the Ridley-Jopling classification. If the types are accompanied by a positive BTA, it will be inserted into MB leprosy. Although MB leprosy is all lepers such as BB, BL and LL or any clinical classification with BTA positive should be treated with mdt-mb regimen.1 Because skin tissue damage test is not always available in this area, in 1995. WHO also simplifies the clinical classification of leprosy by counting the affected skin and nerve lesions. This can be seen in the table below table 4. WHO Clinical Chart (1995) Properties of PB MB (flat macula, raised papules, nodes) - 1 - 5 lesions - Hypopigmentation/erythema - Asymmetrical distribution - Apparent loss of sensation - More than 5 lesions - More symmetrical distribution - Less obvious sensation Of loss of nerve damage (causing loss of sensation/weakness of muscles challenged by the affected nerve) - Only one branch - Many neural branches between diagnoses clinically and histopatics, may be similarities. Keep in mind that a person's clinical diagnosis should be based on the results of a study of clinical abnormalities throughout the human body. It is better not to rely solely on a partial examination of the body, as there is a possibility of clinical diagnosis of the face, different from the body, hands, limbs and so on. Even with one lesion (skin disorder) can be different types. This is the basis of histopathological diagnosis, depending on several places and from which the biopsy is taken. As is customary in the form of wedges diagnosis, starting with inspkesi, palpation, and then conducted a survey using simple tools such as needles, cotton, rekasi tubes of each hot water and cold water, ink pencils and Skin abnormalities in patients with leprosy without complications can be only in the form of a macula, penetrate only or both. If an examination similar to other diseases that do not help to determine a diagnosis is very helpful, mesikpun is not always clear. This is easy to do with needles against pain, cotton against the slave, and if it is still not clear, in both directions new tests to taste the temperature ie hot and cold with the help of 2 test tubes. Identify damage to the function of the autonomic nerve in the area of the lesion, which can be clearly and cannot be confirmed by the help of an ink pencil (the Banawan sign). How to scratch it from the middle of the lesion to normal skin. If there is a disturbance, the scratches on normal skin will be thicker compared to the middle of the lesion. It can also be noted the lack of alopecia in the area of lesions, which can sometimes help, but for sufferers who have a little bald skin it is very difficult to identify it. Impaired motor function is treated with a voluntary muscle test (VMT).1 leprosy that affects the peripheral nerves that need to be considered is enlargement, reconciliation, or lack of spontaneous pain and pain in the press. Only a few superficial nerves can and should be considered namely N. fasialis, N. aurikularis magnus, N. radialis, N. ulnaris, N. ulnaris, N. ulnaris, N. poplitea lateralis and N. tibialis posterior. For the type to lepromatosa neurological anomalies, usually bilateral or careful, moderate to tubular types, neurological abnormalities are more localized after the site of lesions.1 Deformities or defects caused by leprosy can be distinguished in 2 i.e. primary deformation and secondary deformation. Primary defects resulting from granuloma are formed as a reaction to M. leprae, which induces and damages surrounding tissues, namely the skin, the lining of the upper respiratory tract, the bones of the fingers and the face. Secondary defects occur as a result of the absence of primary deformities, especially damage to the nerves of both sensory nerves, motor and vegetative nerves. Secondary defects may include joint contractors, arms and leg mutilation.1 Symptoms of nerve damage due to leprosy include: - Anesthesia on the tip of the small front finger and ring finger - Clawing the little finger and ring finger - Hypotensive atrophy and intersuit muscles, as well as mediat muscle lumbrikalis - anesthesia at hand index finger and middle finger - Incapable of reducing the thumb - Clawing thumb, index and middle finger - Contracted thumb - Tenar muscle atrophy and as lateral lumbrikalis muscle - Manus dorsum anesthesia as well as the proximal tip of the index finger - Wrist drop Incapable of expanding fingers or wrists - Anesthesia of the lower limbs, lateral and dorsal pedis - Fall of the foot - Weakness of the peroneus muscle - Anesthesia of the soles of the feet - Tocrfa - Paralysis of the inner muscles of the foot and the collapse of the ark of the pedis - Temporary and sygomatic branches cause lagothalmus - Bucal mandibular and cervical cause loss of the miki and Cornuthic and eye conjunctiva - Tenar muscular atrophy and both lateral lumbrikalis eye muscle damage to leprosy can also be primary and secondary. The primer leads to alopecia in the eyebrows and eyelashes, can also appeal to other eye tissues. The secondary is caused by damage to N. fasialis, which can lead to partial or total paralysis of N. orbikularis palpebarum, which results in subsequent lagothalmus, causing damage to other parts of the eye. Individual adherence or joining can eventually lead to blindness. The penetration of granuloma into the skin adneksa, consisting of sweat glands, palitis glands and hair follicles can lead to dry skin and alopecia. In lepromatic types, gynecomastia may occur due to hormonal disorders and due to the infiltration of pellets into the seed tubes of the testicles.1 In order to be able to make a clinical diagnosis and its type, it is necessary to know in advance how to diagnose both the pontypray forms of TT and LL, which are systematically described in table 1 above. Leprosy can be distinguished in histopheus and nervous leprosy: histoid leprosy is a variation of lesions in the type of leprosy first proposed by WADE in 1963. Clinically in the form of a solid border node, it can also be in the form of plaques. The bacterioscopic positive is high. It usually occurs as a case of sensitive relapse or relapse resisitens. Pure nerve-type leprosy contains the following signs: - No and no skin lesions - there are one or more nerve enlargements - There is anesthesia and/or paralysis, as well as muscle atrophy in the area in which he retired - Negative bacterioscopic - Mitsuda tests are usually positive - To determine the type, usually the most clubbing type, borderline or non-specific type, must be performed. Leprosy reaction leprosy reaction interruption with acute episode on the course of the disease, which is actually very chronic. Pathophysiology is not known for sure until now. As for the obscure pathophysiology will be explained immunologically. Where our body's immune responses can be beneficial and harmful to so-called pathological immune reactions and leprosy reactions Reactions of leprosy can be distinguished in erythema nodozoum leprosy (ENL) and reaction reversal or modernization reactions.1 ENL mainly occurs in polar types of lepromatose, and can also be in BL, that is, the higher the level of multi-baseilarni, the greater the probability of ENL. Immunopathically, ENL involves a humoral immune response, in the form of an immune complex phenomenon due to the reaction between the antigen M leprae and antibodies (IgM and IgG) - a supplement that will then produce an immune complex. With the formation of this immune complex, ENL belongs to the group of diseases of the immune complex. Levels of lepromatous immunoglobulic antibodies are higher than those of tubular types. This is because in lepromatosis types the number of microbes is much more legib than the club-like type. ENL happens more during brick time. This is because many leprosy microbes die and break down, which are then germs - these leprosy microbes will become antigens, thereby increasing the formation of immune complexes. This immune complex continues to circulate in the bloodstream, which may eventually settle and involve various organs.1 The skin will have clinical symptoms in the form of erythem nodes, as well as pain with additions in the hands and limbs. When it comes to other organs it can lead to symptoms such as iridocistitis, acute neuritis, lymphadenitis, arthritis, orcitis, and acute jade in the absence of proteinuria. ENL can be accompanied by constitutional symptoms from mild to severe, which can be explained immunologically. There is no change in the type of leprosy in ENL reactions, as well as the reverse reaction that occurs in the leprosy of the border type (Li, BL, BB, BT, Ti), so this can be called a borderline reaction. The main part of this leprosy reaction is the cellular immune system, which in case of a sudden increase in SIS. Although the trigger factor is not yet known for sure, it is believed that something has to do with a slow type of hypersensitivity reaction. Inflammatory reactions occur in places where M leprae microbes are located, i.e. in the nerves and skin, usually occurring in the treatment of the first 6 months. Acute neuritis can cause sudden nerve damage, so requires adequate immediate treatment. As described above, that plays a role to determine the type of leprosy SIS. This type of leprosy including frontier can change to TT and LL type, following the ups and downs of SIS, because each type of change always changes in the SIS as well. Similarly, reversal reactions occur in the direction of TT with an increase in SIS only in a sudden and rapid manner.1 The use of the term demotion for leprosy reactions is now almost never used again, lowering this word that describes the process of changing towards lepromatosa. Clinical symptoms of reversal reactions some or all existing lesions become more active and/or new lesions occur in a relatively short period of time. This means that hip lesions become erythema in erythema, macular lesions become infiltrators, infiltration lesions become more infiltrated, and old lesions become more common. The absence of symptoms of acute neuroititis should be noted because it is a very strong prognosis of treatment, if there is neuritis, then the use of corticosteroids is necessary to reduce inflammatory reactions. In some cases, leprosy can be found the phenomenon of Lucio. The lucio phenomenon is a very severe reaction of leprosy, which occurs in the lepromatous type of lepromatosis not the node diffuse. Leprosy of this type is mainly found in Mexico and Central America, in other countries its prevalence is low. Clinical images can be plaque or diffuse infiltration, pink, regular shelf shape and pain. The lesions are mainly in the limbs and then spread throughout the body. Severe lesions will become more erythetic, accompanied by purpura and bula then quickly necrosis and sores are painful. Defeat slowly heals and eventually forms scar tissue. Histopathological images of the lucio phenomenon show ischemic epidermal necrosis with superficial vascular necrosis, swelling and deeper endothelial spread of blood decay. There is a lot of basil M. leprae in capillary endothelial. Although polymorphic infiltration has not been detected as in ENL, the immunophile appears to be an immunoglobulin depot and complements the walls of blood vessels. The circulating immune complex of citer and cryoglobulin is very high in all sufferers. The leprosy examination that can be done in general is an inspection, in addition, other examinations that can be done is an anesthesia exam using needles or cotton as described above. The examination can also be done by checking using ink. In addition to sobbing surveys there are several surveys that can be done to support the diagnosis of leprosy. Bacterioscopic examination (skin tissue damage) Bacteriscope examination is used to help provide diagnosis and observation of treatment. The readiness is made to damage the skin tissue or napkins and the screeching of the nasal mucosa painted with staining against the acid-resistant basil (BTA), namely sil-Nielsen. Bacterioscopic negativity in the patient does not mean that the person does not contain the microbes m. leprae.1 First should determine the lesions on the skin, which are expected to be the densest microbes, after first determining the number of places to be taken. As for the number of lesions is also determined by the goal, which is for research Routine. For the study can be considered 10 places and for the usual minimum 2-4 other lesions are the most active, that is, the most erlmatosa and the most infiltration. Election of both cups regardless of the lack of damage in place, because based on the experience the place is expected to contain most of the germs. Keep in mind that every place of adoption should be noted in order to take in the same place in the treatment of pegamatan to compare results.1 How to take the material using a sterile slingshot. Once the lesion is disinfected it is then clamped between the thumb and fore forelone to become ischemic, so that tissue damage is a little possible blood that will interfere with the image available. The made slices must reach the dermis outside the subepidermal clear zone to reach the expected tissue of many Virchow cells (leperch cells) containing M. leprae microbes. The fabric tires are applied to the plinth of the glass, looped over the fire, and then painted with classic coloring, namely ziehl-Neelsens and other means. Nasal mucous membranes are obtained with the help of nasal blows, it is best to do in the morning with a piece of plastic. Note the liquid properties of the nose whether the liquid, serosa, clearly, muoid, mukopurulen, pingable, there is blood or not. Another way of taking the nasal mucosa is damaging the material with a tool such as a small blunt skalpel or a smear material with cotton lead. It should be taken in the rice septum area and then done as usual. The nasal mucosa mucosa is rare due to the possibility of M. atheism, M. leprae is never positive, if the skin is negative, if treated, the results of negative nasal mucous examination first, pain during the search.1 M. leprae classified as BTA, will appear red on the finished, prominent form (solid) Solid forms are living microbes, while fragmentary and granular forms are dead forms. In theory, it is important to distinguish between solid and non-solid forms, i.e. the line between living M. leprosy and dead. In practice, it is difficult to distinguish between hard and unsteady forms, as they are influenced by many factors. The density of M. leprae without distinguishing solid or non-solid in the set is expressed by the bacterial index (IB) with a value of 0 to 6 according to Ridley. 0 when there is no BTA in 100 viewing fields 1, when 1-10 BTA in 100 LP 2, when 1-10 BTA in 10 LP 3 , when 1-10 BTA average in 100LP 4, when the 11-100 BTA averages in 1 LP 5 , when 101-1000 BTA in 1 LP 6, when the BTA's 1000 average in 1 LP Exam using a light microscope with ember butter at 100x objective lens enlargement. IB man adalag IB on average all damage is available. The morphology index (IM) is a percentage of solid shape compared to solid and unsteady quantities. Formula : Requirement for calculation: - Minimum number of microbes to defeat 100 BTA - IB 1 is not necessary The chat should get 100 BTA must reach within 1000 to 10,000 field of view - starting with THE IB 3 should be calculated by it Nya, because with the IB 3 the maximum should be searched in 100 fields. There is an opinion that if the amount of BTA is less than 100, it can also be calculated chat, but not specified % fixed in the faction, which should not be minimized or memory. Histopathological examination One of the tasks of the macrophages is to conduct phagocytosis, if there is a microbe M leprae enters, depending on the cellular immune system of the person, if the cellular immune system is good, then the macrophages will be able to phagotgh M. leprae. The arrival of histocytes in microbes is caused by immunological processes in the absence of chemotic factors. If the arrival is excessive and there is nothing more to be difagosit, the macrophag will turn into an epithelial cell that cannot move and then be able to turn into dating langhans cells. Excessive mass of epithelioids surrounded by lymphocytes called tuberculosis will be the main cause of tissue damage and defects. In patients with low or paralyzed SIS, histocytes cannot destroy the M. leprae that already exists in it, is even used as a nutrient medium and is called Virchow cells or leper cells or foam cells and as a pro-ussr spread. Granulomas are the accumulation of macrophages and/or their derivatives. Histopathological picture of the type of tubers and more noticeable nerve damage, no germs or just a little and unsteady. In the lepromatous type there is a subposydermal clear zone, which is an area directly under the epidermis, the tissue of which is not pathological. Virchow cells with many microbes have been found. In the border type, there is a mixture of these elements. The serological examination of leprosy is based on the formation of antibodies on the human body infected with leprosy M. Antibodies, which are formed can be specific to M. leprae i.e. anti phenolic glycolipid antibodies (PGL-1) and antibody antiprotein 16 kD and 35 kD. Meanwhile, non-specific antibodies include anti-lipoarabinomanan (LAM) antibodies, which are also produced by M. tuberculosis microbes. The use of this serological examination is that it can help diagnose questionable leprosy because clinical and bacteriological signs are unclear. In addition, it can help identify subclinical leprosy because there are no skin damage, such as in the narrative of the house. Other serological leprosy studies are: - MLPA test (mycobacteriaciab leprosy particle agglutination) - ELISA test (Enzyme Related Immunosorbent Analysis) - ML dipstick test (Mycobacterium leprae dipstick) - ML flow test (Mycobacterium leprae flow test) Diagnosis Banding Dermatofitosis is a disease layer of the cornet in the epidermis, hair and nails caused by the fungus group dermatophyte. Typically, dermatophytosis in humans is caused by fungi of the genus Microsporium, Trichophyton and Epidermophyton. This fungus can cause abnormalities in the skin, nails and hair. But to diagnose comparison of skin lesions, because lepers leads more to tinea korporis. Skin anomalies, which can be seen from the clinic round or oblong lesions, borders firmly consisting of erythema, skuama, sometimes with bubbles and papules at the edges of lesions. The central area is quieter. The description of abnormalities in dermatophytes is similar to skin lesions that occur in lepre especially in the form of TT. To distinguish it, it can be done with either a KOH or a zel-Neelsens dye. The easiest way is to check the sensory condition of the skin nerve. Examination with Woods Light can also be used to distinguish tinea korporis caused by M. kanis, which gives a green-yellow color. Tinea verikolor is a skin disease caused by Malassezia turfur. This chronic superficial fungal disease usually does not give subjective complaints in the form of small spots that are from white to dark brown, especially covering the body and can sometimes attack the armpits, fold hips, arms, upper limbs, neck, face and scalp of the hair. Anomalies in the chlorinated pitiriase version can also be colorful lesions, irregular irregular shapes, clear limits to diffuse. Lespres lesions can sometimes be very similar to chlorinated pitiriase anomalies. But in pitiriiasis versikolor will provide fluorensi when given light with a wooden light that will be green-blue color. Sensory nerve sensitivity tests can also be performed to distinguish it, the damage can also be. Pitiriiasis rosea is an unknown skin disease, starting with the initial lesion in the form of erythema and thin skuama. It is followed by small lesions on the body, arms and upper thighs located in accordance with the folds of the skin and usually heal for 3-8 weeks. Symptoms of the constitution are usually not present, some sufferers complain of mild itching. The disease begins with the appearance of the first lesion (heraldic patch), usually in the body, solitary, oval shape and anular diameter about 3 cm. The rash consists of erythema and thin skuama at the edges. It's from a few days to a few weeks. The next defect occurs 4 - 10 days after the first defect is only smaller, the location parallel to Costa until it resembles an upturned Christmas tree. Defeats are like defeats of leprosy. Pitiriiasi alba merupakan is a non-specific form of dermatitis and is not yet known cause. Characterized by reddish spots and a thin scam that will disappear and leave the area It is believed that the axlyt is caused by a streptococcus infection, but this has not been proven. Pitiriiasis Alba has lesions that are round, oval or irregular plaques. Pink color or according to the color of the skin with a smooth skuama. Once the erythema is lost the lesions are found only depigmentation with a thin skuama. Seborica dermatitis is used for a group of skin diseases based on constitutional factors and pre-collected in wholesale places. Skin deformities consist of oily and slightly yellowish erythema and skuama, the limits are somewhat less level. The lightweight D.S. only hits the scalp in the form of a smooth skuama-skuama, starting as a small patch, which then hits the entire scalp with a smooth and rough skuama. The disorder is called pitiriiasis sika (perchote and druff). The oily form is called pitiriiaz of steatoids, which can be accompanied by erythema and thick crustaceans. The hair in place tends to fall out, starting with the vertex and frontal parts. Psoriasis is a disease whose causes are autoimmune, chronic and live, characterized by the fact that erythema patches are firmly bordered by rough, multi-layered and transparent skuama; accompanied by the phenomenon of wax drops, Auspitz and Kobner. Skin anomalies consist of erythema patches that are raised (table) with skuama on it. Skuama is layered and rough and white mica, and transparent. The size of the disorder varies. The most widely used antiqaprosmic drug treatment at the moment is DDS (diamniodifeni sulfon), followed by chloraphysimin and rifampicin. In 1998, which added 3 other antibiotics for alternative treatment, namely locicin, minocycline and claritromycin. Multi-drug treatment (MDT) has been used to prevent TB resistance since 1951, and leprosy only in 1971. Currently, there are different types and ways of MDT and is implemented in Indonesia as recommended by anyone with alternative medicines to suit needs and opportunities. The most common is resistance to DDS because DDS is the most widely used and cheapest anti-cut drug. The drug is suitable for patients in developing countries with low socio-economic level. The use of MDT is an attempt - Prevention and treatment of resistance - Shorten the period of treatment - Accelerate the disconnection of the transmission chain To organize a combination of drugs to be considered among others: - Therapeutic effects of the drug - Side effects of drugs - Availability of drugs - Drug price - Possible use of DDS DDS the first successful treatment for M leprae, which is in hibernation or sleeping. With DDS germs are active again and may eventually die due to the DDS effect. Indeed there are some cases of leprosy that is resistant to DDS, leprosy that is resistant to DDS is a multi-baseiler type never reported that there is a pausibasiler type of leprosy that is resistant to DDS because pausibasiler leprosy pad levels of SIS in the blood of patients are high, and it does not take long to kill the remaining germs. DDS resistance can be both primary and secondary. Primary resistance occurs in patients who are transmitted by M leprae, which has been resistant and its manifestations may be in different types (TT, BT, BB, BL, LL), depending on the level of sis of the patient. Its low resistance can be treated with a higher dose of DDS, while with a high degree of resistance DDS can no longer be used. Resistance from DDS may occur due to DDS monotherapy, excessively low doses, taking irregular medications, taking drugs not adekuat as dose and duration of administration, treatment for too long, after 4-24 years. DDS side effects include headache, drug eruption, hemolytic anemia, leukopenia, insomnia, peripheral neuropathy, DDS syndrome, toxic epidermal necrolysis, hepatitis, hypoalbominemia and mezemoglybinemia. Rifirampicin Rifirampicin is one of the drugs that becomes a lard one component of the DDS combination with a dose of 10 mg/kg of body weight, daily or monthly. Richampicin should not be administered as monotherapy, as this increases the likelihood of resistance, but combined treatment should not always be administered weekly due to its side effects. Side effects that can occur are hepatotoxic, nephrotoxic, gastrointestinal symptoms, flu-like syndrome, and drug eruptions. Chlorfasyimine (lamp) dosage as an anticut is 50 mg daily or 100 mg hose per day, or 3 x 100 mg each week. Also anti-inflammatory drugs, so dpat is used in ENL with a higher dose, which is 200-300 mg/day, but a new awitan work occurs after 2-3 weeks. The first resistance in one case was proven in 1982. A side effect is a change in skin color to brownish red on the skin and a yellowish color on the sclera, so it is similar to ikterus, especially in large doses. This can happen because Clorafsyimine is a colored substance deposited mainly in the cells of the rithiculoelototelal system, mucosa and skin. Pigmnetation is reversible, although the slow disappearance from the moment of use of the drug stops. Other side effects that occur are due to the use of large doses of abdominal pain, nausea, diarrhea, anorexia, and vomiting. In addition, there may be a loss of Prothionamide Dosage is administered 5-10 mg/kg of body weight daily, and for Indonesia the drug is rarely used. Used. protonamid in the body is uneven, so the minimum level of the limbs is determined. Oflosacin Oflosacin is derived from fluoroquinolon that choking is active against. Mycobacteria leprosy in vitro. The optimal daily dose is 400 mg. A single dose, introduced in 22 doses, will kill the living microbe mycobacterium leprae at 99.99%. Side effects of nausea, diarrhea, and other gastrointestinal disorders, various central nervous breakdowns including insomnia, headache, dizziness, nervousness and hallucinations. However, this rarely requires discontinuation of the drug. Use in children, adolescents, pregnant women and nursing should be carefully, because in experiments in young animals Kuinolon glorifies atrophy. Minocycline belongs to the tetracycline group, having a higher bactericide effect than chlorfasyimine, but lower than rifampicin. The daily dose that can be administered is 100 mg. Side effects of using minoxidil the same as turntracline can lead to discoloration of teeth in the child, sometimes it can lead to hyperpigmentation of the skin and mucous membranes, various gastrointestinal tracts and central nervous mechanisms, including dizziness, and instability. Therefore, minocycline should not be given to children and pregnant women. Claritromycin is a group of macrophics of antibiotics and has baktersid activity against M leprae. In lepromatose patients with a daily dose of 500 mg can kill 99% of live microbes within 28 days and more than 99.9% within 56 days. Proven effects of diarrhea are often found when the drug is administered at a dose of 200 mg. The aforementioned drug supply is a drug can be adapted to a type of leprosy, some combination therapy that can be done is: MDT for multi-baseler (BB, BL, LL or all types with positive BTA) For leprosy multibasiler type can be used: - Rifirampicin 600 mg every month, in its use should be controlled - DDS 100 mg daily - Chlorfaminin : 300 mg each month, under observation, passed 50 mg daily or 100 mg per day or 3 times 100 mg per week. Initially, this combination of drugs is administered 24 doses in 24 to 36 months, provided that the bactericopy should be negative. If the bacterioscopic should be negative. If the bacterioscopic is still positive, the treatment should continue until the bacterioscopic is negative. During treatment is carried out daily and bacterioscopically at least once every 3 months. So most likely, this multi-baseller leprosy treatment is only for 2 to 3 years. This is a relatively very short time and with a solid time compared to the previous method, which took at least 10 years to live. Stopping the introduction of the drug is usually called exemption from treatment After RFT follows (without treatment) clinically and bacterioscopic remains negative and clinically there is no new liveliness, it is declared free from surveillance or called Exemption from Control (RFC). Currently, if there is a clinically available medication, oral administration may be discontinued regardless of bacterioscopic. MDT for pausibasiler (I, TT, BT with negative BTA) is: - Rifirampicin 600 mg each month, with observation - DDS 100 mg daily Both are administered in 6 doses for 6 months to 9 months, i.e. RFT after 6-9 months, ie RFT after 6-9 months. During treatment, clinical examination is every month and bacterioscopic. If there is no clinically new efficacy, and the bacterioscopic remains negative, then it is declared RFC. Since 1995, WHO is no longer advocating for the impeachment of the RFC. If RFT was achieved independently of bacterioscopic outcomes, sufferers are no longer monitored before RFC, although recently many have advocated re-adoption among others to monitor reactions and relapses. Based on the WHO classification (1997) for the benefit of treatment lepers are divided into 3 groups, namely pausibasilers with single lesions, pausibasilers with lesions of 2-5 pieces, and multi-basiler lesions of more than 5 pieces. As a standard of treatment. The WHO Committee of Experts in 1998 reduced the treatment period to 12 doses in 12-18 months, while treatment for PB cases with thumping lesions remained 6 to 9 months. For cases of PB with one treatment of lesions is rifampicin 600 mg combined with Ofloccyn 400 mg and minocycline 100 mg (ROM) single dose. If the mdt structure cannot be implemented for various reasons, the WHO Committee of Experts has a special situation regime in 1998. MB patients who are resistant to rifampicin are usually also resistant to DDS so can only get clofa-cimin. In this treatment regimen becomes chlorfasyimine 50 mg, islocycin 400 mg and minoxicline 100 mg daily for 6 months, transmited chlorfasyimine 50 mg plus locicin 400 mg or minoxicline 100 mg daily for 18 months. Enl treatment is the most commonly used drug corticosteroids tablets, among other prednisone. The dose depends on the mild weight of the reaction, usually prednisone 15-30 mg daily, sometimes more. The heavier the reaction, the higher the dose, but it should be administered 15-30 mg per day, sometimes more. The heavier the reaction, the higher the dose, but instead the bia reaction is too mild not to be given. According to the repair reaction, the dose is reduced gradually until it is dismissed altogether. Note the anti-use of corticosteroids. You can add painkillers and antipyretic and sedatives If it is difficult, the patient can be hospitalized. It is possible that corticosteroids can lead to addiction, ENL will occur if the drug is discontinued or withdrawn at a certain dose, so these patients should get corticostroid continuously. The drug is considered the first choice of the drug thalidomide, but should be careful, as it has teratogenic effects. Therefore, it should not be given to pregnant people or fertile time. In Indonesia, this drug has not been received. Chlorfasyimine, with the exception of an antising drug, can also be used as an ENL antiref reaction, but with higher doses. Also, depending on the mild weight of the reaction, the heavier the dose is usually between 200-300 mg per day. Its effectiveness is slower than corticosteroids. Also, the dose is reduced gradually adjusting to the repair of ENL. Another advantage of chlorfasyimine can be used as an attempt to avoid corticostroid dependence. One of the undesirable side effects of many sufferers is that the skin becomes brownish red, especially in high doses. But it is still reversible, despite the slow disappearance, since the drug was discontinued. There are still other drugs, but not so often used. During this relapse of ENL, anti-leprosy drugs that are administered are transmitted without a reduction in dose. Treatment of reverse reactions it is important to note whether this reaction is accompanied by a neurotic or not. Because without acute neuroticia there is no need for additional treatment. In acute neuritis the first choice of the drug are corticosteroids, the dose of which is adjusted under the soft weight of neuritis, the heavier the dose. Usually injected prednisone 40 mg per day, then slowly reduce. Treatment should be as fast as possible and with a strong dose to reduce sudden nerve damage. There is rarely a dependence on corticosteroids. Limbs affected by acute nevrit should be rested. Analgesics and sedativ, if necessary, can be introduced. Chlorfasyimine for reverse reactions is less effective, so it is never used, so thalidomide is ineffective for reverse reactions. Recommended treatment for leprosy reactions sub the direction of leprosy - The General Directorate for Disease Control and Environment (PP and PL) of the Indonesian Ministry of Health can see the scheme below. Table 5. Administration Prednisone Week Administration Recommended Daily Dose Week 1 - 2.40 mg Week 3 - 4.30 mg Week 5 - 6.20 mg Week 7 - 8.15 mg Week 9 - 10.10 mg Week 11 - 12.5 mg Heavy and long-term injection of ENL lamps and there is a dependence on steroids (administration of prednisone can not be reduced to 0), it is necessary to increase clorafsyimine for adults 300 mg/ day for 2-3 months. If the repair rating is downgraded 200 mg/day for 2-3 months. If there is an improvement reduced to 100 mg/day for 2-3 months, then return to the initial dose of chlorfasyimine, 50 mg/day if the patient is still in mdt treatment, or discontinued if the patient was declared RFT. At the same time, the dose of prednisone decreases gradually. The best way to prevent disability or disability prevention (POD) is to make early diagnosis of leprosy, rapid and proper treatment of MDT. In addition, by recognizing symptoms and signs of leprosy reaction is accompanied by neurological disorders and begin treatment with corticosteroids as soon as possible. If there is a sensitivity disorder, sufferers are given simple instructions such as wearing shoes to protect affected feet, wear Bill's gloves, work with sharp or hot objects, and wear glasses to protect your eyes. In addition, he is also taught how to care for skin care daily. It starts with a daily check. This starts with checking for no bruises, cuts or sores. After that, the arms and legs are soaked, cleaned and oiled, so as not to dry and not to break. WHO's expert committee on leprosy makes a classification of defects in the hands, feet and eyes of lepers. At the seventh meeting (1977) a special amendment to the eye was made, it can be seen in the table below.1 Defects in the hands and feet of level 0 No sensitivity disorder, No visible damage or deformity Level 1 There is a sensitivity disorder, no visible damage or deformation Level 2 There is damage or deformity of the eye Level 0 No abnormalities /eye damage (including visus) Level 1 There is an anomaly / eye damage, but the invisible, slightly reduced visus Level 2 there are visible eye abnormalities (e.g. lagotalkum, irit, damage to the cornea) and visus seriously impaired. Medical rehabilitation efforts that can be made for disabled people, particularly during surgery and physiotherapy. Although the results are not perfect to return to origin, but its function and cosmetic can be improved. Another way is to work by providing suitable jobs for his disability so that he can succeed and can increase confidence in addition to psychological therapy. Prognosis In cases of leprosy that is not treated, patients who can heal themselves without treatment are patients with leprosy type TT and BT who develop in TT. While others will evolve gradually. Symptoms that occur often due to nerve trauma and reaction phase. BT, BB, BL, LLLs can grow into worst upgrades, while BT, BB and BL downgrades will be able to recover on their own. BL, LLLs and LLP can thrive on ENL. The periphery often lead to irreversible damage to the sensory nerve and difficulty working with, can only be reduced inflammation of corticosteroids.3 Conclusion of the above study may conclude that leprosy is a chronic infectious disease and is caused by Mycobacterium leprae, which is intracellular mandatory. These bacteria will attack the peripheral nerves, then the skin and the lining of the upper respiratory tract, these bacteria can also go to other organs of the body except the central nerve contracte. Library of Mulyathi, K. Puji, Susilo, D. Leprosi. 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