

Is Hansen Disease Curable?

Yohannes Negesse*

Centre Hospitalier Universitaire de La Guadeloupe, 97 139, Guadeloupe, France.

*Correspondence:

Dr. Yohannes NEGESSE, Centre Hospitalier Universitaire de La Guadeloupe, 97 139, Guadeloupe, France, Tel +0590 690 610180, E-mail: yohanesnegesse@gmail.com.

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I would like to draw the attention of health professionals regarding the issue of one of the so-called « Neglected Tropical Diseases». One of these diseases is Hansen disease.

We see everywhere mentioned that this disease is “curable”. The word “cure” related on the perspective of individual medicine (curative medicine, clinical medicine ...) means “healing” or “restoration to health”. However when it comes to the public health approach the word “cured” takes completely another meaning. In that perspective the word “cured” means “non-contagious” or “non-infectious” or “non-dangerous” for others. Just to give an example : for instance a multibacillary patient presenting episodes of erythema nodosum leprosum years after being released from MDT will be considered as “cured” according the public health approach, while this patient is seriously sick according the individual medicine approach.

Hansen disease is more and more becoming a model of statisticians who presently are saying that this disease can be easily treated with a single dose of antibiotics and that the complexity of Hansen disease resides more and more in its mathematical modeling. The mathematicians are asking more and more funds to tackle the devastating dimension of the disease by putting it within a comprehensible mathematical model. The disease has been completely monopolized by the public health and never in medical history the gap between “medicine” and “public health” has been so colossal than the prevailing with Hansen disease. We, individual medicine adepts, are assisting completely helpless at the diffusion of guidelines advocating to give a single dose of antibiotics for patients if properly and individually diagnosed would have benefited of lifelong (lifetime) treatment.

The paradigm shift required concerning Hansen disease is also addressing the important issue of the mode of transmission of the disease. Indeed Doctor A. Hansen himself was giving a great

importance to the mode of transmission “soil to man”. This preventable mode of transmission has been completely occulted; just the mode of transmission from man to man has been taken into consideration and also has ended up at the incomprehensible guidelines of chemoprophylaxis by giving a single dose of antibiotics to patient’s contact.

The paradigm shift is also necessary regarding the pathophysiological mechanisms of tissue damage during hanseniasis. The public health approach is only stressing the infectious component of the disease and yet not properly addressed (single dose antibiotics or lifelong treatment). The medical approach has to take into account the two components of the disease: namely the infectious and immunological component.

Regarding the infectious component, the spectrum and cycle of the disease are determined by the type of peripheral nerves involvement for this infectious disease affecting essentially the nerves. There is an African saying stipulating that “leprosy is licking the skin but biting the nerves”. The classification of the disease may easily be realized by simple nerve biopsy (or even fine needle aspiration cytology technique) in order to know if it is a paucibacillary or a multibacillary infection according the bacillary load within the nerve. Indeed at early stage by nerve biopsy it is easy to diagnose cases which will progress to the lepromatous pole of the disease. The multibacillary nerve involvement is a source of bacteremia which will be the phenomenon allowing dissemination of the bacilli to the cooler areas of the body. In brief a single skin lesion associated with a multibacillary nerve involvement may be a great opportunity to practice secondary prevention by addressing seriously and rigorously the disease at this early stage. Instead of a single dose of MDT, this case would have necessitated daily dose of MDT for a longer period. Even if parallelism is done with Wipple disease, same consideration has to be given regarding the length of antibiotherapy regarding multibacillary leprous neuritis.

Now coming to the immunological component, by the scientific method of simple induction and deduction we can see similarities, parallelism and commonalties between the “yard stick” leprosy classification of Ridley - Jopling and the classification of immunological diseases proposed by McGonagle and McDermott. Thus the Tuberculoid pole of Ridley-Jopling correlates with the Autoimmune (adaptive immunity) of McGonagle and McDermott and lepromatous pole of Ridley – Jopling corresponds with Autoinflammatory pole (innate immunity) of McGonagle – McDermott classification.

All in all Hansen disease can be defined as a “NON-IDIOPATHIC, NON-CURABLE AUTOIMMUNE AND AUTOINFLAMMATORY INFECTIOUS DISEASE”.

Hansen disease becoming a natural autoimmune and autoinflammatory disease of known etiology will be an opportunity to have more pathophysiological insights towards the IDIOPATHIC immunological diseases.

Hansen disease will allow to bridge the divide between autoimmunity and autoiflammatory since the same pathological agent is giving variable clinical manifestations depending on the host responses.

Hansen disease will allow also bridging the divide between medicine and public health.