

IMMUNODOMINANTS PROTEINS OF *Mycobacterium tuberculosis* IN A MODEL OF EXPERIMENTAL LUNG TUBERCULOSIS AND LATENT TUBERCULOSIS. León-Contreras Juan Carlos, Hernández-Pando Rogelio. Department of Experimental Pathology and Electron Microscopy. Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán. Vasco de Quiroga 15, Tlalpan 14000, México City. MÉXICO. jcleonc@hotmail.com, jcleon@correo.unam.mx.

The WHO contemplates to the tuberculosis like a problem of public health due to the resurgence of the disease, to the frequency of cases and the quantity of people that have had contact with the bacillus [1,2]. The transmission of the bacillus is generally by air route [2, 3], the results of this contact can be, on one hand, the elimination of the bacillus for the immune system, to remain in latent state or in extreme cases to develop the lung tuberculosis since this organ is the main target of this bacillus. The models of latent infection and progressive disease it has already been used previously and the immunologic aspects of cytokine production and histopathological have been detailed [4, 5, 6]. For to develop the latent infection they were used mice B6D2F1, this stage is characterized to present a stable number of bacillus, there are not evident histopathologic changes in lungs and the organism doesn't present disease symptoms, the importance of outlining an experimental model with these conditions is important since the world population's third is under these conditions [1, 4]. On the immune system the guest's response plays a fundamental role in the development of the disease, when it becomes evident the cytokines expression as IL-1, IL-2, IL-12, INF γ and TNF α are spoken of an immunologic response of type 1 (Th1) and it is in fact in this stage when there is a control of the disease, in the moment that the immunologic system presents a type response Th2 it is expressed IL-4, IL-10, interstitial inflammation and a high mortality of the experimentation animals is presented [7]. On the other hand, it is known that while the micobacteria is in cultivation means it secretes high quantities of proteins, lipoproteins and glicoproteins, it is not known with accuracy the role that play neither the utility of many of these [8, 9], however, the presence of these during the progressive disease and in latent infection they make them candidates to be used as immunogenic products against the tuberculosis. The position for this work consisted on determining the presence of the proteins MPT64 and LAM, to evaluate its presence by means of immunohistochemic and ultrastructural localization of particles of gold that denote the specific reaction of the antibodies against those these proteins in lungs of mice with tuberculosis and with latent infection. When entering to the lung the micobacterias they are wrapper up for alveolar macrophages (Fig. 1 A and B) and it is inside their cytoplasm secrete the protein MPT64, the brown color it denotes the presence of the protein inside the cytoplasm of the macrophage (arrows in A), to corroborate and to determine that the mark is due to the so much micobacteria in progressive disease (Fig. 1 C) as of the latent infection (Fig. 1 D) the lungs were processed and they were included in acrylic resin (LR-White) to be able to locate by means of immunostaining to the micobacteria and the mark with colloidal gold of 5 nm diameter; for the protein LAM was used the process and the similar mark to the one used with MPT64. The utility of the proteins secreted by the micobacterias of the complex tuberculosis has been broadly questioned and they have been proven in tuberculosis models with intravenous infection and in tests of PPD, however the presence of these proteins inside the alveolar macrophages so much in lungs with latent infection as in the progressive disease it represents a favorable point so that it is used as immunogenic products for the vaccination, since the vaccine BCG used a great quantity of countries at the moment has shown in the last years to be ineffective for the prevention of the disease in adults with latent infection.

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