Sessione XVII - Infezione tubercolare latente

UPDATE SULL'INFEZIONE TUBERCOLARE LATENTE

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Tuberculosis (TB) remains a leading causes of death worldwide and its control is a challenges for Public Health. In 2015, the World Health Organization has adopted a new resolution to accelerate efforts and investments to reach the goal of eliminating tuberculosis as a disease for the year 2050. Epidemiological data and mathematical models show that the pursuit of this objective requires, especially in low tuberculous endemic countries, the association of measures to control the transmission of active tuberculosis (current strategy) to direct measures to limit the reactivation of the disease in individuals with latent infection. It is estimated that around 2 billion people are affected by latent tuberculosis infection, of which only 10-15% will develop the disease. For years latent tuberculosis infection (LTBI) has been considered a condition characterized by the presence of a persistent immune response to M. tuberculous (Mtb) antigens in the absence of symptoms and active tuberculous disease. However, recent observations have led to the assumption that there is a dynamic spectrum of phenotypes associated with different clinical prognosis: subjects where the immune system has completely eliminated the pathogen, those in which a temporary immune control of the infection is achieved with the development of the disease remaining possible in presence of triggers (HIV, immunosuppressive therapy), individuals with subclinical or incipient disease who will progress to post-primary tuberculosis. Recently, other tests based on the same principle have been approved: QuantiFERON TB Gold Plus with an additional antigenic tube that can stimulate CD8+ and C-Tb, a skin test that measures cell-mediated hypersensitivity to ESAT-6 and CFP-10 proteins of Mtb. Both are indirect tests revealing the presence of cell-mediated immunity to Mtb antigens and are not able to directly detect the presence of dormant or actively replicating Mtb or to identify which of the infected subjects is at greater risk of progression to the disease. A revolution is instead represented by new biomarkers of incipient TB (ITT, Incipient Tuberculosis Test). New imaging tools such as Fluorine-D-Glucose PET-CT scan have already proven able to identify pathological conditions compatible with subclinical disease in patients with asymptomatic HIV. Finally, a specific mRNA has been detected suitable to predict the risk of TB progression in healthy individuals exposed to Mtb.