TUBERCOLOSI E MICOBATTERIOSI: PROPOSTA DI PERCORSO DIAGNOSTICO

E. Tortoli [1], E. Tortoli [1]

[1]*IRCCS San Raffaele, Emerging Bacterial Pathopgens Unit, Milano*

Tuberculosis (TB) is a notifiable, contagious, infectious disease. In Italy, for many years the prevalence of TB cases is <10 / 100,000 inhabitants and, likewise in other low endemic countries, the cases are concentrated in large urban areas. TB can affect any district of the organism. Pulmonary TB is the most important form, it is by far the most frequent and the only one involved in spreading contagion. Patients with cavitary disease spread the etiologic agent with cough, within droplets of saliva. The main forms of extra-pulmonary TB affect pleura, nervous system, lymph nodes, bones, and urogenital apparatus. Miliary TB is a disseminated form of disease. TB symptoms include fever, night sweats, weight loss and asthenia. Cough is the most frequent symptom of pulmonary TB and is often associated with expectoration and hemoptysis. The main etiological agent of TB is Mycobacterium tuberculosis, among the other members of M. tuberculosis complex the most commonly involved are M. bovis and M. africanum. Nontuberculous mycobacteria (NTM), which are present in the environment (water and soil), can occasionally cause disease (mycobacteriosis) in humans. The isolation of MNTs from clinical specimens does not allow per se diagnosis of mycobacteriosis since these microorganisms, which are opportunistic, cause disease only in host with predisposing conditions. The diagnosis of active TBC is based on: presence of symptoms; imaging (evidence of opacity, pleural effusion, cavitations or changes in serial radiographs) and microbiological investigations. The microscopic examination is poorly sensitive and specific, actually it does not allow to distinguish M. tuberculosis from MNTs; it is nevertheless useful, in particular for the therapy monitoring. For culture, to be performed following decontamination, it is recommended to use both solid and liquid media. It is strongly recommended to perform a genetic amplification test. In a patient with a history of TB, or originating from high endemic countries, or contact of patients with MDR-TB, or HIV-positive, a molecular test for rapid detection of mutations responsible of rifampicin-resistance is recommended. Microscopy, culture and genetic amplification are also recommended for samples from patients suspected for extra-pulmonary TB. In such samples, false-positive results are unlikely while false-negative are very common. The phenotypic susceptibility testing is recommended for all culture-positive patients. In case of simultaneous resistance to isoniazid and rifampicin, susceptibility testing for second line drugs (at least amikacin, capreomycin, kanamycin and moxifloxacin) is also required. Strain genotyping is recommended for every culture-positive patient.