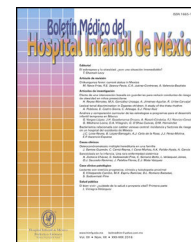




Boletín Médico del Hospital Infantil de México

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EDITORIAL

Pediatric tuberculosis[☆]



Tuberculosis pediátrica

Tuberculosis remains as a global public health problem with a greater impact in developing countries, where this entity represents one of the main causes of morbidity and mortality in children¹. Tuberculosis in children represents from 3–40% of total tuberculosis cases and most of its incidence occurs in highly endemic countries. Its presence indicates the circulation of *Mycobacterium tuberculosis* or the contact with an untreated or undiagnosed sick person. The child in close contact with an infective source without prophylaxis is at great risk of becoming infected with tuberculosis and, in most cases, he will manifest the disease within the first year of exposure². The factors that contribute to the development of the disease include age, socioeconomic status, nutrition and the presence of comorbidities, particularly the human immunodeficiency virus infection. In the clinical spectrum of the disease, the participation of polymorphisms involved in the immune response has been described³. At the same time, the relationship between different lineages and virulence of *M. tuberculosis* has been reported. However, the association between the clinical manifestations of the disease and the lineage of *M. tuberculosis* in pediatric populations is very limited⁴.

The age of presentation of tuberculosis in children shows a particular behavior: a greater incidence in infants younger than two years old, a diminished incidence between five and ten years old and a new increase in adolescence⁵.

There are many clinical manifestations of the disease and significantly different from those in adults. Pulmonary tuberculosis represents the most frequent clinical presentation and ganglionic tuberculosis is the most frequent extrapulmonary manifestations in the pediatric population; children present a greater risk of progression to disseminated forms, miliary and meningeal, which are of great relevance due to their high morbidity and mortality.

It has been recognized that the real impact of tuberculosis in children has probably been underestimated, in part due to the difficulties to corroborate the diagnosis. In our context, the epidemiological contact is documented in only 50% of the cases⁶. Chest radiography is one of the studies that offers more information since the presence of a mediastinal adenopathy is highly suggestive of tuberculosis; however, it is not always present. Moreover, chest CT scan gives more structural information and is indicated for complicated forms, while magnetic resonance is required mainly for meningeal or vertebral tuberculosis cases. Cutaneous tests or interferon-gamma release are useful as complementary studies due to their difficulty to differentiate between infection and active disease, besides the limitation of interpreting the results of cutaneous tests in patients who received the Bacille Calmette-Guérin (BCG) vaccine⁷. Despite the challenges to achieve a microbiological confirmation, cultures are essential in all cases. However, the results usually indicate tuberculosis compatible findings since it is only possible to identify stained mycobacteria or to isolate the bacteria from the culture in the minority of the cases. This fact exemplifies the difficulties to corroborate the diagnosis of tuberculosis in the pediatric population. However, the start of antimicrobial treatment is indicated due to the probability of progression of the disease; in addition, all the other resources must be exhausted to confirm or rule-out the diagnosis. Tuberculosis is still an endemic disease in Mexico. Consequently, BCG vaccination is still recommended despite all the reported efficacy variations in the literature, since it has been demonstrated that its prescription reduces the risk for miliary and meningeal tuberculosis in children⁸.

In conclusion, the burden of the tuberculosis disease in pediatric population illustrates a sustained transmission in the community that requires keeping control policies for the population. Therefore, the importance of raising awareness among health workers to timely institute prophylaxis in exposed children and treatment in pediatric patients with tuberculosis is highlighted.

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Conflict of interest

The author declares no conflict of interest.

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