

Tuberculosis in children

Treatment of Tuberculosis in children: drug resistance

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The difficulty in the diagnosis of tuberculosis is one of the principal problems in pediatrics, the nature paucibacilar of the tubercular primo infection and the low positivity of the culture of gastric juice inhibit frequently the confirmation of the disease. For this motive it is necessary to do an exhaustive search of the primary focus of the infection to identify the responsible strain and start the treatment based on the study of sensibility.

In the treatment of tuberculosis in the child we must bear in mind the age, area of origin and cultures with sensibility of the germ isolated in the contact. In the cases of multiresistant stains the treatment is controversial; because the absence of clinical essays that determine the efficiency and toxicity of second line medications, the therapeutic rate, and the suitable duration of the treatment. The appearance of multiresistant stains, forces to replace the isoniazid and rifampicin for other treatments of minor efficiency. These treatments must be kept for long time, increasing the costs and the side effects. Most of the authors recommend to continue the treatment minimal for 12 months after the negativization of the cultures. The appearance of side effects with the utilization of second line medications varies among 42 and 50 % appearing with minor frequency in breast-fed babies that in teenagers and adults.

Diagnosis of childhood Tuberculosis

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Children account for a major proportion of the global tuberculosis disease burden, especially in endemic areas. However, the accurate diagnosis of childhood tuberculosis remains a major challenge.

Diagnosis may be difficult because of many factors including nonspecific clinical signs, variable interpretation of chest radiographs, paucibacillary disease, difficulty in obtaining specimens for culture and relatively low rates of bacteriological confirmation. The diagnosis of TB in children relies mainly on a careful history, clinical examination, known contact with an adult index case, a positive tuberculin skin test as evidence of latent tuberculosis and suggestive signs on chest radiography. Although bacteriological confirmation of TB is not always feasible, it should be sought whenever possible.

In most immunocompetent children, TB presents with symptoms of a chronic disease: an unremitting *cough* for more than 21 days, *fever* for 14 days and *weight loss or failure to thrive*. The use of well-defined symptoms with a persistent, non-remitting character considerably improves diagnostic accuracy.

It is always advisable to confirm diagnosis of TB in children. Appropriate clinical samples include spontaneous or induced sputum, gastric aspirates and certain other material from the suspected sites of involvement.

Many promising advances have been made in the development of novel tools to diagnose tuberculosis: nucleic acid amplification tests, immunological tests, rapid culture systems, rapid detection of drug resistance and others. These tests are not currently recommended for routine diagnosis of childhood TB, as they have been inadequately studied in children and have performed poorly in the few studies which have been done.

DOTS and IMCI: perspectives in the articulation of strategies

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In 2006 was incorporated the IMCI strategy as an alternative to address the integral attention of pregnant women and children under 5 years in a project with indigenous populations in Colombia to control and prevention of tuberculosis. At the same time, this was an opportunity to make link with local social actors to strengthening key family practices.

The main actions of integration have been: 1) Training of health workers in both strategies. 2) Strengthen the health authority to monitoring. 3) Work with social actor as indigenous leaders, teachers, local government, ONG and associations of community mothers to prioritize health problems and adapt messages of key family practices, and 4) Shaping community-based networks.

The benefits of integration are: 1) link between health workers groups, especially transmissible diseases control and infant health. 2) Improve of local performance in health. 3) Improve knowledge and abilities of health workers. 4) Quality improvement in the provision of health services, especially in indigenous communities, pregnant women and children. 5) Work with social actors in the community as an alternative to improve familiar practices. The experience is an opportunity to reach goals of Stop TB strategy and accelerate the expansion of IMCI in Colombia.