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The difficulties of childhood tuberculosis diagnosis

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ABSTRACT

Aims and objectives: The WHO estimate that 8.8 millions new cases of tuberculosis occurred in 2010, (between 8.5 and 9.2 millions) linked to 1.45 millions death cases.

The load of children tuberculosis is estimated at 10–15 per cent of the total load. In 2014 more than one million children have developed the disease.

The children just as adults are exposed to contract and develop the multi resistant forms of the tuberculosis, constituting a major issue for the disease control. The children less than 5 years of age are the most exposed to present the most serious and more often deadly forms of the illness. Further, in many developing countries, the lack of pediatric forms of the tuberculosis drugs makes it difficult to control the problem.

The tuberculosis diagnosis among the children is based on a set of arguments: the presence of a tuberculous person excreting bacillus, exposition and receptivity conditions of the child (the level of his immunity, the level of under nutrition, associated pathologies etc...).

The diagnosis is also based on the research of the symptoms and other signs suggestive of tuberculosis: tuberculin skin test, thoracic radiography, interferon-gamma test.

The aim of this study, is to describe and analyze the features and difficulties of the biological diagnosis of tuberculosis among the children and to find a strategy for the improvement of the results.

Methods: It's a retrospective study from 2002 to 2015, dealing with pediatric patients' records from whom a bacteriological diagnosis was requested. We took advantage of the methods used on the laboratory to establish a diagnosis: microscopy, culture, study of the susceptibility to the tuberculosis drugs in solid medium and molecular biology.

Results: From 2002 to 2015, only 207 strains were isolated from the children samples, aged from 0 to 15 years predominantly female sex (sex ratio is 0.53) with an average age of 9 years. The detailed results of the diagnosis methods of tuberculosis and the drugs resistance will be presented.

Conclusions: Tuberculosis in children is often undiagnosed or difficult to diagnose, most developing countries still using ancient methods which can recognize only the developed tuberculosis.

It's necessary to evaluate the issue's importance in order to improve the diagnosis conditions (systematic culture and susceptibility test in children), and to ensure the availability of the effective treatment (the pediatric formulation of the essential drugs).

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Conflict of interest

None declared.