

## Tuberculosis in children in Chile

### La tuberculosis infantil en Chile

Tania Herrera Martínez<sup>a</sup>

<sup>a</sup>Director of National Tuberculosis Programme. Ministry of Health. Chile



Tuberculosis is one of the 10 leading causes of death worldwide, causing 1.8 million deaths, reaching more than 10 million infected in 2015, affecting not only adults but also children. During the same year previously mentioned, the World Health Organization estimated that around 1 million children suffer from tuberculosis and 170,000 children died from this disease<sup>1</sup>.

In Chile, during the second half of the 19th century and the first decades of the 20th century, tuberculosis was considered an epidemic, producing a high morbidity and mortality and triggering several institutions which were fighting against it. However, only with chemotherapy with antituberculosis drugs it was possible to decrease the mortality and the number of incidence, along with the support of the National Health Service, allowing access to new technologies to the entire population<sup>2</sup>.

Correa and Zenteno article, analyzed by Schonhaut in this journal, was written precisely at a time when the first antituberculosis drugs were discovered, but these were not yet used in Chile, so the medical treatment consisted basically on hygienic and alimentary procedures, besides the complete isolation of patients<sup>3</sup>. For this reason, the suggestion to separate the newborns from the mother affected by tuberculosis is not surprising at all. This methodology, as seen in the article, was effective in avoiding infection and spread.

This article also proves that there are no differences in the development of the birth weight of infants who are (or not) children of mothers affected by tuberculosis, although the Schonhaut analysis showed that all institutionalized children presented height and weight deterioration. Fortunately, there is currently an effective treatment that finally prevents the separation of mothers with their children. Today, there is a strong indication in the national legislation of not doing so, nor forbidding breastfeeding<sup>4</sup>.

Thanks to the advances in tuberculosis control in recent decades in Chile, the incidence of this disease is one of the lowest in Latin America, and even more in children younger than 15 years old, with less than 2 cases per 100,000 inhabitants in the latter group<sup>5</sup>.

According to the analysis of the national registry, there have been 255 cases of tuberculosis in children younger than 15 years old during the last 5 years, with an annual average of 51 cases and a slight preponderance of women compared to men. The most important risk factor for childhood tuberculosis is to be in contact with an intradomiciliary bacilliferous case, an antecedent that exists in one-third of cases in 2016.

Regarding the presence of severe types of tuberculosis in children younger than 5 years old, (which are totally preventable with the administration of BCG vaccine) since 2012, there have been 7 cases. In the fifth period of the year, there have been reported 4 cases of

Correspondence:  
Tania Herrera Martínez  
tania.herrera@minsal.cl

children with HIV coinfection, one case of multidrug-resistant tuberculosis and two deaths due to tuberculosis.

With regard to the operational situation in this population, this study reached a coverage of 83% of children who received the indication of chemoprophylaxis in 2016, with an age average of 15 years old. This percentage is still very far from the ambitious goal of a 100% of coverage. It is known that it requires great efforts for health workers to reach this goal, even being involved in legal procedures.

Analyzing the epidemiological situation of childhood tuberculosis is highly relevant, since the presence of this infection and disease in this group is related with the transmission of *M. tuberculosis* in the community, making it a valuable and useful indicator for the program. Likewise, evaluating the operational activities illustrates us both in the access and opportunity of the diagnosis and an early treatment, as well as the difficulties that the health workers are facing, in this disease which, year after year, is affecting more and more vulnerable people.

## References

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