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## LEPROSY AFTER ELIMINATION

The discovery in the 40s of last century that sulfones showed bacteriostatic effect on *M. leprae* brought hopes that finally leprosy could be cured. However, two events overshadowed this important discovery: the need for a long-term treatment, often for the whole life, and onset of sulphone resistance. Indeed, in the first case it is difficult to understand a concept of cure in which the cured patient uses a drug for life. In the second, in the case of leprosy, it is known that monotherapy facilitates drug resistance.

With the introduction of multidrug therapy (MDT) recommended by the World Health Organization (WHO) in the 1980s these problems seem to be solved. In fact, after multidrug therapy (MDT) introduction occurred a gradual, but significant, modification in the leprosy's scenario, both in the global and national levels. With its extensive use, the prevalence of active cases decreased dramatically worldwide. The first epidemiological dates showed that, within two decades, there has been a marked decrease in the estimate number of leprosy cases in the world: 10 million to 12 million in mid-80s to 0.51 million in 2003.<sup>1</sup> In this new context, a strategy to eliminate leprosy as a public health problem became a reality.<sup>2</sup> The successful use of MDT, in fact, is not due exclusively to the therapeutic regimen, which is effectively robust, but it is also due to the evident improvements in health care services to patients. However, since the beginning of the implementation of this strategy, the "elimination" world has become controversial. In practical grounds, "elimination" was defined as achieving a level of less than 1 case per 10 000 population in terms of prevalence by 2000. Implicit is that there would be a residual number of cases. For others, instead of a numerical target, it should be thought in terms of guarantee

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and achieving treatment for all by the year 2000, ie, to ensure access to proper diagnosis and treatment for leprosy. In fact, these assumptions are embedded in the elimination strategy, but without doubt, the political component of the possibility of eliminating the disease was the most challenging.

Elapsed 12 years after the elimination goal, and according to official reports coming from 105 countries and territories throughout 2012, the global prevalence of leprosy cases registered in early 2012 stood at 181,941 cases, while the number of new cases detected during 2011 was 219,075. In fact, are amazing numbers when compared with the period before 2000. Thus, the WHO elimination strategy can be considered as the most important event in leprosy control since the adoption of the cases compulsory's isolation.

Certainly, leprosy has not disappeared from the face of the earth and official figures shows that in many countries there is still an important endemic. One example is Brazil that, though with a marked reduction in prevalence over the last decade, still shows a prevalence rate of 1.24 per 10,000, according to data from January 2011.<sup>4</sup> Similarly this occurs in other countries and

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in certain focal areas or some countries. In this context, it is noteworthy that, although the prevalence has decreased, the same does not occur with the detection rate of the disease. There is a linearity constant at this rate indicating that the elimination strategy had little impact on disease transmission.

These facts confirm the need to focus carefully in the period after elimination. New challenges arise and must be approached with courage and innovation. The sharp decrease in prevalence made leprosy cases scarce in health units. In an integrated, decentralized health system, such as in Brazil, this quickly leads to a loss of interest and expertise on part of professionals in these units, which, to some extent, is understandable and expected. Even in reference centers, clinical knowledge about the disease seems to be extinguished slowly.<sup>5</sup> The result is that the diagnostic mistakes both on favor or against leprosy appear to increase. Throughout Brazil, there is just a few centers, intermediate units, university clinics and research institutions that maintains a complete treatment system more specialized for leprosy. Certainly, within the proposal of our health care system, the hierarchy of services is expected. However, it seems that, for leprosy, there is a marked loss of the minimal clinic experience to suspicion of cases or even a common sense to a conclusive clinic diagnostic of a case and its immediate treatment.

In large part, this lack of expertise has its origins in medical schools, except in exceptional cases, that do not include leprosy as a topic of their curriculum in any of the clinical disciplines that would be appropriate to

insert it. On the other hand, there is a vertical vision of some professionals that even confirming the disease's diagnosis choose refer immediately the case, because they understand as a routine to treat them at higher levels of complexity, although we know this is not necessary in the vast majority of cases.

There is therefore a need to revisit leprosy in its multidisciplinary and multifactorial nature. It should be treated in any health unit basic, as well as to ensure the access to more complex centers to those cases with severe complications. Likewise, it is necessary to ensure broad access to early diagnosis on the part of health professionals, as well demonstrated by Cortela and Iginotti<sup>6</sup> in stating that almost half of dentists in a city with high endemicity without specific training, held suspect leprosy during dental treatment of these cases and referred them to the clinic.

In fact, a number of actions and resources will be needed to deal with a new challenge: leprosy in a new scenario after elimination. The lessons learned from the implementation of this strategy clearly indicate that new approaches should be considered and discussed to face a disease that, despite the significant reduction in prevalence, will continue to be present in different countries of the world, including Brazil. One such approach is of urgent implementation: - recovery of leprosy as a discipline in the medical schools and increasing the offer of training courses for doctors and nurses, among others health professionals, primarily for those working in public health.

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