



TROPICAL DERMATOLOGY

## DIFFERENT TTC REPETITION OF MYCOBACTERIUM LEPRAE IN HOUSEHOLD CONTACTS: A CASE REPORT

*Regitta Indira Agusni<sup>(1)</sup> - Cita Rosita Sigit Prakoeswa<sup>(1)</sup> - Muhammad Yulianto Listiawan<sup>(1)</sup> - Indropo Agusni<sup>(1)</sup> - Dinar Adriaty<sup>(2)</sup> - Ratna Wahyuni<sup>(2)</sup> - Iswahyudi Iswahyudi<sup>(2)</sup> - Shinzo Izumi<sup>(2)</sup>*

*Airlangga University, Department Of Dermatology&venereology, Leprosy Study Group - Institute Of Tropical Diseases, Surabaya, Indonesia<sup>(1)</sup> - Institute Of Tropical Diseases - Airlangga University, Leprosy Study Group, Surabaya, Indonesia<sup>(2)</sup>*

**Background:** Children are susceptible to Mycobacterium leprae infection. Clinical manifestations of children with leprosy are often seen in adolescence or young adult due to the long incubation period of M. leprae. Children with household contact have a greater risk of suffering leprosy, although the risk of infection is not limited to household contact. Genotyping will help identifying M. leprae strain to assess the pattern of disease transmission

**Observation:** A 9-year-old girl complained of numbness on her arms for the past 5 years. Reddish patches on chest and ears were seen since 2 years ago. Macula hypoesthesia, decreased sensitivity of touch and temperature, gloves and stocking anesthesia, nerve enlargement were absent. Bacteriological index was 0 and morphological index 0%. The father of this patient was suffering leprosy LL type and had finished leprosy treatment. Patient lives with her parents. Serological examination showed anti-PGL-1 IgM: Child 49,565 u / mL, Father 5,353 u / mL, Mother 1,566 u / mL; Anti-PGL-1 IgG: Children > 6,300 u / mL, Father 853 u / mL, Mother 0 u / mL. PCR of father and child are positive, but negative on mothers. Genotyping results based on TTC repetition show 33 times (child) and 20 times (father). This showed different strains of M. leprae of the children and father, reinforcing the alleged source of the child leprosy transmission is not from family

**Key message:** Genotyping difference of M. leprae in 1 family indicates that there are other sources of infection besides the household contact. The possibilities of transmission can be suspected from the environment. Several studies on North Maluku and the north coast of East Java indicates that M. leprae isolates were found in the roots of aquatic plants and ponds in endemic areas, with the assumption that M. leprae lives inside protozoan bodies.

