

Chapter 186

Leprosy

Delphine J. Lee, Thomas H. Rea,
& Robert L. Modlin

REFERENCES

1. Skinsnes OK: Immunopathology of leprosy: The century in review. *Int J Lepr Other Mycobact Dis* 41:329, 1973 [PMID: 4591734]
2. Shepard CC: The experimental disease that follows injection of human leprosy bacilli into foot pads of mice. *J Exp Med* 112:445, 1960
3. Ridley DS: Histological classification and the immunological spectrum of leprosy. *Bull World Health Organ* 51:451, 1974 [PMID: 4549496]
4. Mitsuda K: On the value of a skin reaction to a suspension of leprosy nodules. *Int J Lepr Other Mycobact Dis* 21:347, 1953
5. Walsh GP et al: Leprosy-like disease occurring naturally in armadillos. *J Reticuloendothel Soc* 18:347, 1975 [PMID: 1214263]
6. Cole ST et al: Massive gene decay in the leprosy bacillus. *Nature* 409:1007, 2001 [PMID: 11234002]
7. World Health Organization: Global Leprosy Situation, 2005. *Wkly Epidemiol Rec* 80:289-296, 2005
8. World Health Organization: Global leprosy situation, 2007. *Wkly Epidemiol Rec* 82:225-232, 2007
9. Newell KW: An epidemiologist's view of leprosy. *Bull World Health Organ* 34:827-857, 1966
10. Truman R: Leprosy in wild armadillos. *Lepr Rev* 76:198-208, 2005
11. Thomas DA et al: Armadillo exposure among Mexican-born patients with lepromatous leprosy. *J Infect Dis* 156:990-992, 1987
12. Mostafa HM et al: Acid-fast bacilli from former leprosy regions in coastal Norway showing PCR positivity for *Mycobacterium leprae*. *Int J Lepr Other Mycobact Dis* 63:97-99, 1995
13. Ducan ME et al: A clinical and immunological study of four babies of mothers with lepromatous leprosy, two of whom developed leprosy in infancy. *Int J Lepr Other Mycobact Dis* 51:7-17, 1983
14. Cho SN et al: Prevalence of IgM antibodies to phenolic glycolipid I among household contacts and controls in Korea and the Philippines. *Lepr Rev* 63:12-20, 1992
15. Camacho ID et al: Type 1 leprosy reaction manifesting after discontinuation of adalimumab therapy. *Arch Dermatol* 145:349-351, 2009
16. Scollard DM, Joyce MP, Gillis TP: Development of leprosy and type 1 leprosy reactions after treatment with infliximab: A report of 2 cases. *Clin Infect Dis*. 43:e19-e22, 2006
17. Cole ST et al: Massive gene decay in the leprosy bacillus. *Nature* 409(6823):1007-1011, 2001
18. Krutzik SR et al: TLR activation triggers the rapid differentiation of monocytes into macrophages and dendritic cells. *Nat Med* 11:653-660, 2005
19. Ng V et al: Role of the cell wall phenolic glycolipid-1 in the peripheral nerve predilection of *Mycobacterium leprae*. *Cell* 103(3):511-524, 2000
20. Chakravarti MR, Vogel F: A twin study on leprosy. In: *Topics in Human Genetics*, edited by PE Becker. Stuttgart, Georg Thieme, 1973, pp. 1-124
21. Mira MT et al: Susceptibility to leprosy is associated with PARK2 and PACRG. *Nature* 427:636-640, 2004
22. de Vries RR, van EW, Ottenhoff TH: HLA class-II immune response genes and products in leprosy. *Prog Allergy* 36:95-113, 1985
23. Berrington WR et al: Common polymorphisms in the NOD2 gene region are associated with leprosy and its reactive states. *J Infect Dis* 201:1422-1435, 2010
24. Bochud PY, Hawn TR, Aderem A: Cutting edge: A Toll-like receptor 2 polymorphism that is associated with lepromatous leprosy is unable to mediate mycobacterial signaling. *J Immunol* 170:3451-3454, 2003
25. Bochud PY et al: Toll-like receptor 2 (TLR2) polymorphisms are associated with reversal reaction in leprosy. *J Infect Dis* 197:253-261, 2008
26. Bochud PY et al: Polymorphisms in Toll-like receptor 4 (TLR4) are associated with protection against leprosy. *Eur J Clin Microbiol Infect Dis* 28:1055-1065, 2009
27. Zhang FR et al: Genomewide association study of leprosy. *N Engl J Med* 361:2609-2618, 2009

28. Ridley DS: Histological classification and the immunological spectrum of leprosy. *Bull World Health Organ* **51**:451-465, 1974
29. Ridley DS: *Pathogenesis of Leprosy and Related Diseases*. London, Wright, Butterworth & Co. Ltd., 1988
30. van Brakel WH, Khawas IB: Silent neuropathy in leprosy: An epidemiological description. *Lepr Rev* **65**:350-360, 1994
31. Khanolkar VR: Pathology of leprosy. In: *Leprosy in Theory and Practice*, 2nd edition, edited by RG Cochrane, TF Davey. Bristol, John Wright and Sons, Ltd, 1964, pp. 125-151
32. Lyde CB: Pregnancy in patients with Hansen's disease. *Arch Dermatol* **133**(5):623-627, 1997
33. Pedley JC: The presence of *M. leprae* in human milk. *Lepr Rev* **38**:239-242, 1967
34. Gebre S et al: The effect of HIV status on the clinical picture of leprosy: A prospective study in Ethiopia. *Lepr Rev* **71**(3):338-343, 2000
35. Trindade MA et al: Leprosy and HIV co-infection in five patients. *Lepr Rev* **76**:162-166, 2005
36. Scollard DM et al: The continuing challenges of leprosy. *Clin Microbiol Rev* **19**:338-381, 2006
37. Barnetson RS et al: Cell mediated and humoral immunity in "reversal reactions". *Int J Lepr Other Mycobact Dis* **44**:267-273, 1976
38. Rea TH, Jerskey RS: Clinical and histologic variations among thirty patients with Lucio's phenomenon and pure and primitive diffuse lepromatosis (Latapi's lepromatosis). *Int J Lepr Other Mycobact Dis* **73**:169-188, 2005
39. Latapi F, Zamora AC: The "spotted" leprosy of Lucio (la lepra "manchada" de Lucio). *Int J Lepr Other Mycobact Dis* **16**:421-437, 1948
40. Modlin RL et al: T lymphocyte subsets in the skin lesions of patients with leprosy. *J Am Acad Dermatol* **8**:182-189, 1983
41. Cooper CL et al: Analysis of naturally occurring delayed-type hypersensitivity reactions in leprosy by *in situ* hybridization. *J Exp Med* **169**:1565-1581, 1989
42. Yamamura M et al: Defining protective responses to pathogens: Cytokine profiles in leprosy lesions. *Science* **254**:277-279, 1991
43. Yamamura M et al: Cytokine patterns of immunologically mediated tissue damage. *J Immunol* **149**:1470-1475, 1992
44. Krutzik SR et al: Activation and regulation of Toll-like receptors 2 and 1 in human leprosy. *Nat Med* **9**:525-532, 2003
45. Bleharski JR et al: Use of genetic profiling in leprosy to discriminate clinical forms of the disease. *Science* **301**:1527-1530, 2003
46. Lee DJ et al: LILRA2 activation inhibits dendritic cell differentiation and antigen presentation to T cells. *J Immunol* **179**:8128-8136, 2007
47. Cruz D et al: Host-derived oxidized phospholipids and HDL regulate innate immunity in human leprosy. *J Clin Invest* **118**:2917-2928, 2008
48. Bjorvatn B et al: Immune complexes and complement hypercatabolism in patients with leprosy. *Clin Exp Immunol* **26**:388-396, 1976
49. Rea TH, Shen J-Y, Modlin RL: Epidermal keratinocyte Ia expression, Langerhans cell hyperplasia and lymphocytic infiltration in skin lesions of leprosy. *Clin Exp Immunol* **65**:253-259, 1986
50. Modlin RL et al: In situ identification of cells in human leprosy granulomas with monoclonal antibodies to interleukin 2 and its receptor. *J Immunol* **132**:3085-3090, 1984
51. Sampaio EP et al: Prolonged treatment with recombinant interferon gamma induces erythema nodosum leprosum in lepromatous leprosy patients. *J Exp Med* **175**:1729-1737, 1992
52. Lee DJ et al: Integrated pathways for neutrophil recruitment and inflammation in leprosy. *J Infect Dis* **201**:558-569, 2010
53. Panunto-Castelo A et al: The Rubino test for leprosy is a beta2-glycoprotein 1-dependent antiphospholipid reaction. *Immunology* **101**(1):147-153, 2000
54. Worobec SM: Treatment of leprosy/Hansen's disease in the early 21st century. *Dermatol Ther* **22**:518-537, 2009
55. Jamet P, Ji B: Marchoux chemotherapy study group. Relapse after long-term follow up of multibacillary patients treated by WHO multidrug regimen. *Int J Lepr Other Mycobact Dis* **63**:195-201, 1995
56. Cellona RV et al: Long-term efficacy of 2 year WHO multiple drug therapy (MDT) in multibacillary (MB) leprosy patients. *Int J Lepr Other Mycobact Dis* **71**:308-319, 2003
57. Girdhar BK, Girdhar A, Kumar A: Relapses in multibacillary leprosy patients: Effect of length of therapy. *Lepr Rev* **71**:144-153, 2000
58. Shetty VP et al: Clinical, histopathological and bacteriological study of 52 referral MB cases relapsing after MDT. *Lepr Rev* **76**:241-252, 2005

59. Rea TH: Trials of daily, long-term minocycline and rifampin or clarithromycin and rifampin in the treatment of borderline lepromatous and lepromatous leprosy. *Int J Lepr Other Mycobact Dis* **68**(2):129-135, 2000
60. Job CK et al: Skin pigmentation from clofazimine therapy in leprosy patients: A reappraisal. *J Am Acad Dermatol* **23**:236-241, 1990
61. Convit J et al: Immunoprophylactic trial with combined *Mycobacterium leprae*/BCG vaccine against leprosy: Preliminary results. *Lancet* **339**:446-450, 1992
62. Sieling PA et al: CD1-restricted T cell recognition of microbial lipoglycans. *Science* **269**:227-230, 1995

