

REFERENCES

- Abraham, A.; Sharma, V.K. and Kaur, S. (1990) :
Assessment of testicular volume in bacilli-
ferous leprosy.
Indian J. Lepr., 62 : 310.
- Akhtar, M.; Ali, M.A. and Mackey, D.M. (1980) :
Lepromatous leprosy presenting as orchitis.
Am. J. Clin. Pathol., 75 : 712.
- Amelar, R.D. and Dubin, L. (1977) :
Testicular biopsy. In : Male Infertility.
Amelar, R.D. and Dubin, L. (eds) W.B. Saunders
Co., Philadelphia. P. 161.
- Bach, M.A. and Bach, J.F. (1981) :
The use of monoclonal anti-T cell antibodies to
study T cell imbalances in human diseases.
Clin. Exp. Immunol., 45 : 449.
- Baker, B.Sc. (1983) :
The invitro culture of the leprosy bacilli.
Int. J. Lepr., 51 : 397.
- Baker, H.W.G. (1976) :
Testicular control of FSH secretion.
Recent. Progr. Horm. Res., 32 : 429.
- Bardin, C.W. and Paulsen, C.A. (1981) :
The testes. In : Text book Of Endocrinology, 8th
edition. Williams R.H. (ed). W.B. Saunders Co.,
Philadelphia. p. 471.

Binford, C.H.; Meyers, W.M. and Walash, G.P. (1982) :

Leprosy.

JAMA, 24 : 2283.

Bloom, B.R. and Godal, T. (1983) :

Selective primary health care : Strategies for control of the disease in the developing world
V. Leprosy.

Rev. Infect. Dis., 5 : 765.

Boyar, R.; Perlow, M.; Hellman, L.; Kapen, S. and Weitzman, E. (1972) :

Twenty-four hour pattern of LH secretion in normal men with sleep stage recording.

J. Clin. Endocrinol. Metab., 35 : 73.

Boddingius, J. (1982) :

Mechanisms of peripheral nerve damage in leprosy by electron and light microscopy. Quaderni di cooperazione sanitaria.

Health Cooperation Papers, N.1 : 65.

Britz, J.S.; Askenase, P.W.; Steinman, R.M.; and Gershon, P.K. (1982) :

Specialized antigen-presenting cells. Splenic dendritic cells and peritoneal exudates cells induced by Mycobacteria, active effector T-cells that are resistant to suppression.

J. Exp. Med., 155 : 1344.

Browne, S.G. (1970) :

Leprosy. In : Documenta Geigy, Ciba Geigy Ltd., Basle, Switzerland. P.21.

Browne, S.G. (1979) :

Mycobacterial diseases: Leprosy. In : Dermatology In General Medicine. 2nd edition. Fitzpatrick, T.B.; Eisen, A.Z. (eds) MacGraw Hill Book Co., New York. p. 1492.

Browne, S.G. (1980) :

Leprosy. In : Clinical Tropical Diseases, 7th edition. Adams, A.R. and Macgrath, B.G. (eds). Blackwell Scientific Publications, Oxford. p.196.

Browne, S.G. (1984) :

Leprosy. In : Acta Clinica. Browne, S.G. (ed.) Ciba Geigy Ltd., Basle, Switzerland p. 13.

Browne, S.G. (1985) :

The history of leprosy. In : Medicine In The Tropics, 1st edition, Hastings, R.C. (ed). Churchill Livingstone Press, New York. p.1.

Browne, S.G. (1987) :

Leprosy. In : Dermatology In General Medicine. Fitzpatrick, T.B.; Eisen, A.Z.; Wolf, K. and Austen K.F. (eds). McGraw Hill Book Co., New York. p. 2184.

Browne, T.A. (1959) :

Factors influencing transmission of leprosy. Trans. R. Soc. Trop. Med. Hyg., 53 : 179.

Brycesson, A.D. (1992) :

Leprosy. In : Textbook Of Dermatology, Vol. II.

Champion, R.H.; Burton, J. L. and Ebling, F.J.
(eds). Blackwell Scientific Publications, London
p. 1065.

Bryceson, A.D. and Pfaltzgraff, R.E. (1979) :

Treatment of leprosy. In : Leprosy.

2nd edition. Churchill Livingstone, Edinburgh
and New York p. 49.

Bullock, W.E. (1978) :

Leprosy. A model of immunologic perturbations in
chronic infection.

J. Infect. Dis., 137 : 371.

Burke, C.W. and Anderson, D.C. (1972) :

Sex hormone binding globulin in an estrogen
amplifier.

Nature, 240 : 38.

Busuttil, A.; Orr, S. and Hargreave, T.B. (1983) :

Histopathology. In : Male Infertility.

Hargreave, T.B. (ed). Springer-Verlag, New York.
p.112.

Canizares, O. (1978) :

Epidemiology of Leprosy. In : Clinical Tropical
Dermatology, 1st edition.

Canizares, O. (ed). Blackwell Scientific Publi-
cation, Oxford. p. 109.

Carayon, A. (1971), :

Study of spermatic-lymphatic circulation in
leprous patients with gynecomastia.

Int. J. Lepr., 39 : 204.

Carmel, P.W.; Araki, S. and Ferin, M. (1976) :

Pituitary stalk portal blood collection in rhesus monkeys : Evidence for pulsatile release of GnRH.

Endocrinol., 99 : 243.

Carter, J.N.; Tyson, J.E. and Tolis, G. (1978) :

Prolactin secreting tumours and hypogonadism in 22 men.

N. Engl. J. Med., 299 : 847.

Costellani, C.L. (1980) :

germ cells. In : Descended And Cryptorchoid Testis. Hafez, E.S. and Martins, N. (eds). Harper and Row publishers, London. p.21.

Chary, C.W. (1940) :

Testicular biopsy : its value in male sterility. JAMA, 115 : 1429.

Cho, S.; Yanagihara, D.L.; Hunter, S.W.; Gelber, R.H. and Brennan, P.J. (1983) :

Serological specificity of phenolic glycolipid I from Mycobacterium leprae and use in sero-diagnosis of leprosy.

Infect. Immunol., 41 : 1077.

Choyce, D.P. (1973) :

Blindness in leprosy.

Tropical Doctor, 3 : 18.

Christensen, A.K. (1970) :

Fine structure of testicular interstitial cells in humans. In : Advances In Experimental Medicine And Biology, Vol. X. Rosenberg, E. and Paulsen, A.C. (eds). Plenum Press, New York. p.75.

Christensen, A.K. (1975) :

Leydig cells. In : Handbook Of Physiology. Hamilton, D.W. and Greep, R.O. (eds). Williams and Wilkins, Baltimore, p.57.

Clermont, Y. (1963) :

The cycle of the seminiferous epithelium in man. Am. J. Anat., 112 : 35.

Clermont, Y. (1970) :

Dynamics of human spermatogenesis. In : Advances In Experimental Medicine And Biology The Human Testis., Vol.X., Rosenberg, E. and Paulsen, A.C. (eds). Plenum Press, New York. p. 47.

Clermont, Y. (1972) :

Kinetics of spermatogenesis in mammals : Seminiferous epithelium cycle and spermatogonial renewal.

Physiological Reviews, 52 : 198.

Cochrane, R.G. and Davey, F.T. (1964) :

Leprosy. In : Theory And Practice, 2nd edition.

Cochrane, R.G. and Davey, T.F. (eds).

John Wright and Sone Ltd., Bristol. p.456.

Convit, J.; Aranzazu, N. and Ulrich, M. (1979) :

Immunological changes observed in indeterminate and lepromatous patients and mitsuda negative contacts after incubation of a mixture of *M. leprae* and BCG.

Clin. Exp. Immunol., 36 : 214.

Convit, J. and Pinardi, M.E. (1979) :

Leprosy confirmation in armidillo.

Science, 184 : 1191.

Convit, J.; Ulrich, M. and Aranzazu, N. (1980) :

Vaccination in leprosy - observation and interpretations (editorial).

Int. J. Lepr., 48 : 62.

Courot, M.; Hoghereau, M.T. and Ortavant, R. (1970) :

Spermatogenesis. In : The Testis, vol. I.

Johnsen, G. and Van-Demark (eds). Acad. Press, New York. p. 480.

Crowly, W.F.; Beitins, I.Z. and Vale, W. (1980) :

The biologic activity of a potent analogue of GnRH in normal and hypogonadotropic men.

N. Engl. J. Med., 302 : 1052.

Danielssen and Boeck (1848) :

Quoted from Ghosh, S.S. (1964).

Das, K.C. (1984) :

National leprosy eradication program in India.

XII International Leprosy Congress. New Delhi. p. 5.

Davey, T.F. and Rees, R.J. (1974) :

The nasal discharge in leprosy, clinical and bacteriological aspects.
Lepr. Rev., 45 : 121.

DeKretser, D.M.; Burger, H.G. and Hudson, B. (1974) :

The relationship between germinal cells and serum FSH levels in males with infertility.
J. Clin. Endocrinal Metab., 38 : 787.

Dizerga, G.S. and Sherins, R.J. (1981) :

Endocrine control of adult testicular function. In : The Testis. Burger, H. and Dekretser, D. (eds). Raven Press, New York.
p.210.

Draper, P. (1983) :

The bacteriology of *Mycobacterium leprae*.
Int. J. Lepr., 51 : 563.

Duncan, M.E.; Melsom, R.; Pearson, J.M.H. and Ridley, D.S.
(1981) :

The association of pregnancy and leprosy.
Lep. Rev., 52 : 245.

Eden, E.V.; Varies, R.R.; de Amaro, J., Schreuder, G.M.;
Leiker, D.L. and Rood, J.J. (1982) :

HLA-DR associated genetic control of the type of leprosy in a population from Surinam.
Hum. Immunol., 4 : 343.

Eden, W.V.; Varies, R.R.; Stanford, J.L. and Rook, G.A.W.
(1983) :

HLA-DR₂ associated genetic control of response
to multiple skin tests with new tuberculins.

Clin. Exp. Immunol., 4 : 343.

El-Beheiry, A.; Abouzeid, S.; El-Ghazzawi, E.; El-Mansy, E.
and Salama, N. (1979) :

The leprous testis.

Arch. Androl., 3 : 173.

El-Shiemy, S.; El-Hefnawy, H.; Abdel-Fattah, A.; El-Hawary,
M.E. and Fares, F. (1976) :

Testicular and epididymal involvement in leprosy
with special reference to gynecomastia.

Int. J. Dermatol. 15 : 52.

Fabbrini, A. and Hafez, E.S.S. (1980) :

Testis and epididymis. In : Human Reproduction,
2nd edition. Hafez, E.S. (ed).

Harper and Row publishers, New York. p. 15.

Fawcett, D.W. (1975) :

Ultrastructure and function of sertoli cells.

In : Handbook Of Physiology. Hamilton, D. and
Greep, R. (eds). Williams and Wilkins, Baltimore
p. 21.

Freund, M. (1982) :

Interrelationship among the characteristics of
human semen and factors affecting semen-specimen
quality.

J. Reprod. Fertil., 4 : 143.

Freund, M. (1963) :

Effects of frequency of emission on semen output
and estimate of daily sperm production in man.
J. Reprod. Fertil., 6 : 269.

Gershon, R.K.; Eodley, D.; Naidarf, K.F. and Plak, W. (1977):

The hermaphrocyte : a suppressor-helper T cell.
Cold Spring Harbor Symp. Quant. Biol., 151:85.

Ghree, C.; Myles, K. and Peluso, I. (1981) :

Hormonal changes in human leprosy.
Lepr. Res., 52 : 121.

Ghosh, S.S. (1984) :

Histochemical changes in the tissues of differ-
ent types of leprosy lesions.
Int. J. Dermatol., 9 : 89.

Grabstald, H. and Swan, L. (1952) :

Genito-urinary lesions in leprosy with special
reference to the problem of atrophy of testis.
J. Am. Med. Ass., 149 : 1287.

Griffin, J.E. and Wilson, J.D. (1966) :

Disorders of the testes and male reproductive
tract. In : Textbook Of Endocrinology.
7th. edition. Wilson, J.D. and Foster, D.W.
(eds). W.B. Saunders Co., Philadelphia. p.1012.

Gupta, S.C.; Chhabra, B.; Mehrotra, T.N. and Bajaj, A.K.
(1982) :

A study of antispermatzoal antibodies in
leprosy.
Int. J. Lepr., 50 : 43.

Gupta, S.C.; Mehrota, T.N. and Bajaj, A.K. (1984) :

Gonadal involvement in leprosy.

Int. J. Lepr., 52 : 25.

Gustafson, A. (1979) :

Male reproductive system. In : Functional Histology. Borysenko, M.; Beringer, T. and Gustafson, A. (eds). Little, Brown and Co., Boston. p. 185.

Hansen, G.A. and Looft, G. (1895) :

Quoted from Cochrane, R.G. and Davey, F.T. (1984).

Harboe, M. (1980) :

Immunological aspect of leprosy.

Int. J. Lepr., 48 : 193.

Harboe, M. (1982) :

Significance of antibody studies in leprosy and experimental models of the disease.

Int. J. Lepr., 50 : 342.

Heller, C.G. and Clermont, Y. (1964) :

Kinetics of the germinal epithelium in man.

Recent Prog. Hormone Res., 20 : 545.

Hotchkiss, R.S. (1942) :

Testicular biopsy in the diagnosis and treatment of sterility in the male.

Bull. N.Y. Acad. Med., 18 : 600.

Hunter, S.W. and Brennan, P.J. (1981) :

A novel phenolic glycolipid from *Mycobacterium leprae* possibly involved in immunogenicity and pathogenicity.

J. Bacteriol., 147 : 728.

Irvine, W.J. (1974) :

Autoimmunity in endocrine diseases.

Proc. R. Soc. Med., 67 : 548.

Jacobson, R.R. (1986) :

Leprosy. In : Current Therapy, 1st edition.

Robert, R. (ed). W.B. Saunders Co., Philadelphia

p. 80.

Job, C.K. (1961) :

Gynecomastia and leprous orchitis- A preliminary study.

Int. J. Lepr., 29 : 423.

Job, C.K. and McCaden, V.P. (1963) :

Leprous orchitis in reactional borderline cases.

Int. J. Lepr., 31 : 273.

Joffrion, V.C. and Brand, M.E. (1984) :

Leprosy of the eye - a general routine.

Lepr. Rev., 55 : 105.

Jopling, W.H. (1971) :

Clinical aspects of leprosy.

Tubercle, 63 : 295.

Jopling, W.H. (1984) :

Reply to Dr. Rabello, et al.'s letter to the editor.

Int. J. Lepr., 51 : 420.

Jopling, W.H. and Harman, R.R. (1979) :

Leprosy. In : Textbook Of Dermatology. 3rd

edition. Rook, A.J.; Wilkinson, D.S. and Ebling,

F.J. (eds). Blackwell Scientific Publications,
Oxford. p. 749.

Jopling, W.H. and Harman R.R. (1986) :

Leprosy. In : Textbook Of Dermatology, 4th
edition.

Rook, A.; Wilkinson, D.S.; Ebling, F.J.; Champion,
R.H. and Burton, J.L. (eds). Blackwell Scientific
Publications, Oxford, p. 823.

Kalla, N.R.; Nisula, B.C. and Menard, R. (1980) :

The effect of estradiol on testicular testosterone biosynthesis.
Endocrinol., 106 : 35.

Kalra, S.P. and Kalra, P.S. (1983) :

Natural regulation of LH secretion in the rat.
Endocrine Rev., 4 : 311.

Kanan, V. and Vijaya, G. (1984) :

Endocrine-testicular functions of leprosy.
Horm. Metabol. Res., 18 : 148.

Kapur, T.R. and Verma, R.D. (1982) :

Study of dermatoglyphics in tuberculoid leprosy.
Lepr. India., 54 : 143.

Kato, L. (1977) :

In vitro cultivation of mycobacteria from human
lepromas and from an armidillo infected with *M.
leprae*.
Int. J. Lepr., 45 : 107.

Kerr, J.B. and Dekretser, D.M. (1981) :

The cytology of the human testis. In : The Testis. Burger, H. and Dekretser, D.M. (eds). Raven Press, New York. p. 141.

Khanolkar, U.R. (1984) :

Pathology of leprosy. In : Leprosy In Theory And Practice. 2nd edition. Cochrane, R.G. and Davey, T.F.(eds). John Wright and Sons Ltd., Bristol, England, p. 130.

Kotteswaran, A.; Chacko, C.J. and Job, C.K. (1980) :

Skin adnexa in leprosy and their role in the transmission of *Mycobacterium leprae*.
Lepr. India, 52 : 475.

Kramasky, B.; Edmondson, H.A.; Petero, R.L. and Reynolds, T.B. (1968) :

Lepromatous leprosy in reaction.
Arch. Path., 85 : 518.

Kumar, B. (1991) :

Circulating antispermatozoal antibodies in leprosy.
Int. J. Lepr. 59 : 334.

Kumar, B.; Raina, A.; Kaur, S.; Dash, R.J.; Samuel, E. and Datta, B.N. (1982) :

Clinicopathological study of testicular involvement in leprosy.
Lepr. India., 54 : 48.

Kwittken, J. and Peck, S.H. (1987) :

Borderline leprosy.

Arch. Dermatol., 93 : 50.

Labrie, F.; Belanger, A. and Cusan, L. (1980) :

Antifertility effects of LH-RH agonists in male.

J. Androl., 1 : 209.

Lai, A.F.; Chan, P.J.; Van Furth, R. and Harboe, M. (1980):

In vitro synthesis of anti-mycobacterial antibodies in biopsies from skin lesion of leprosy patients.

Infect. Immunol., 27 : 297.

Lederer, E. (1975) :

Cells walls of mycobacteria and related organisms chemistry and immunostimulant properties.

Molecul. Cellul. Biochemist., 7 : 87.

Leeson, C.R.; Leeson, T.S. and Paparo, A.A. (1985) :

The male reproductive system. In : Textbook Of Histology. Leeson, C.R.; Leeson, T.S. and Paparo, A.A. (eds). W.B. Saunders Co., Philadelphia, London, p. 492.

Lever, W.F. and Schaumberg, G. (1975) :

Bacterial disease. In : Histopathology Of The Skin, 5th edition. Lever, W.F. and Schaumberg, G. (eds).

Lippincott Co., Philadelphia, p. 284.

Levin, H.S. and Thomas, A.J. (1985) :

Testicular biopsy.

American Urological Association update Series,

4 : 86.

Liang, K. (1984) :

Hormonal changes in male patients with lepromatous leprosy.

Clin. J. Dermatol., 17 : 18.

Macomber, D. and Sanders, M.R. (1929) :

The spermatozoa Count.

N. Engl. J. Med., 200 : 981.

Manson-Bahr, P.E. and Apted, F.I. (1982) :

Leprosy. In : Manson's Tropical Diseases, 18th edition. Manson-Bahr, P.E. (ed). English Language Book Society and Bailliere Tindall, London. p.298.

Martin, F.I.; Maddbock, I. and Brow, J.B. (1968) :

Leprous endocrinopathy.

Lancet., 2 : 1320.

Mathews, L.J. and Trautman, J.R. (1965) :

Clinical and serological profiles in leprosy.

Lancet., 2 : 915.

Mc-Dougall, A.C. (1989) :

Historical background. In : Leprosy, Basic Information And Management, 2nd edition. Mc-Dougall, A.C. and Yawalkar, S.J. (eds). Ciba-Geigy Limited, Basle, Switzerland. p.11.

Mehra, V.; Mason, L.H.; Fields, J.P. and Bloom, R.B. (1979) :

Lepromin -- induced suppressor cells in patients with leprosy.

J. Immunol., 123 : 1813.

Nelson, R.; Harboe, M.; Myrvang, B.; Godal, T. and Belehun, A.

(1982) :

Immunoglobulin class specific antibodies to *M. leprae* in leprosy patients including the indeterminate group and healthy contacts as a step in the development of methods for serodiagnosis.

Clin. Exp. Immunol., 47 : 225.

Morley, J.E.; Wright, D.J.M. and Katz, M. (1977) :

Hormonal changes associated with testicular atrophy and gynecomastia in patients with leprosy.

Clin. Endocrin., 6 : 299.

Moschella, S.L. (1985) :

Leprosy. In : Dermatology Book, 2nd edition.

Moschella, S.L. and Hurley, H.J. (eds) W.B.

Saunders Co., Philadelphia. p.948.

Mukhiya, R.D.; Nigam, P.; Dayal, S. and Goyal, B.M. (1982) :

Gonadal involvement in leprosy.

Lepr. Rev., 53 : 205.

Murphy, G.F.; Sanchez, N.P.; Flynn, T.C.; Sanchez, J.L.;

Mihm, M.C. and Soter, N.A. (1986) :

Erythema nodosum leprosum : Nature and extent of the cutaneous microvascular alterations.

J. Am. Acad. Dermatol., 14 : 59.

Naftolin, F.; Yen, S.S.C. and Judd, H.L. (1973) :

Pulsatile patterns of gonadotropins and testosterone in man : the effects of clomiphene with and without testosterone.

J. Clin. Endocrinol. Metab., 36 : 285.

Naftolin, F.; Yen, S.S.C. and Tsai, C.C. (1972) :

Rapid cycling of plasma gonadotropins in normal men as demonstrated by frequent sampling.

Nature, 236 : 92.

Nankin, H.R. and Troen, P. (1971) :

Repetitive LH elevations in serum of normal men.

J. Clin. Endocrinol. Metab., 33 : 558.

Narayanan, L.; Shankara, M.K., Redi, B.M.; Kircheimer, W.F.

and Balusubrahmanay, M. (1972) :

Arthropod feeding experiments in lepromatous leprosy.

Lepr. Rev., 43 : 188.

Nath, I.; Prasad, H.K.; Satish, M.; Desikan, S.K.; Seshadri,

P.S. and Lyer, C.G. (1982) :

Quoted from Draper, P. (1983).

Nigam, P.; Mukhiya, R.D. and Gupta, A.K. (1988) :

Male gonads in leprosy, clinicopathological study.

Indian J. Lepr., 60 : 77.

Oppenheim, J.J. and Grey, I. (1982) :

Quoted from Rook, G.A.W. (1983).

Pallen, M.J. and McDermott, R.D. (1986) :

How might *M. leprae* enter the body ?

Lepr. Rev., 57 : 289.

Pareek, I. (1985) :

Testicular affection in lepromatous leprosy.

Int. J. Lepr., 50 : 20.

Pares, Y. (1978) :

Comments on Dr. Chatterjee's correspondence

(Letter to the Editor).

Int. J. Lepr., 46 : 223.

Pearson, J.M.H. (1977) :

Primary dapsone resistant leprosy.

Lepr. Rev., 48 : 129.

Pearson, J.M.H.; Rees, R.J.W. and Weddell, A.G.M. (1970) :

Mycobacterium leprae in the striated muscles of patients with leprosy.

Lepr. Rev., 41 : 155.

Pedley, J.C. (1967).

Presence of *M. leprae* in human milk.

Lepr. Rev., 38 : 239.

Prabhakaran, K.; Harris, E.P. and Kichheimer, W.F. (1980) :

Failure to detect O-diphenoloxidase in cultivable mycobacteria obtained from feral armadillos.

Lepr. Rev., 51 : 341.

Prasad, H.K. and Nath, I. (1981) :

Incorporation of H-thymidine in mycobacterium *leprae* with differentiated human macrophage.

J. Med. Microbiol., 14 : 279.

Rea, T.H. (1979) :

Lucio phenomenon.

Lep. Rev., 41 : 155.

Rea, T.H. and Ridley, D.S. (1979) :

Lucio phenomenon : A comparative histopathologic study.

Int. J. Lepr., 47 : 161.

Ree, G.H.; Martin, F.I.R.; Myles, K. and Peluso, I. (1981) :

Hormonal changes in human leprosy.

Lepr. Rev., 52 : 121.

Rees, R.J.W. (1962) :

Studies on mycobacterium leprae murium in tissue culture.

Br. J. Exp. Path., 43 : 221.

Rees, R.J.W. (1966) :

Enhanced susceptibility of the thymectomized and irradiated mice to infection with M. leprae.

Nature., 211 : 657.

Rees, R.J.W. (1971) :

The impact of experimental human leprosy in the mouse on leprosy research.

Int. J. Lepr., 39 : 201.

Rees, R.J.W. (1984) :

The dosage of anti-leprosy drugs for children.

Lepr. Rev. 55 : 309.

Rees, R.J.W.; Ellard, G.A. and Ambrose, E.J. (1979) :

Reprot of workshop on experimental chemotherapy
of the Eleventh International Leprosy Congress.
Int. J. Lepr., 47 : 297.

Rees, R.J.W.; Weddells, A.G.W.; Palmer, E. and Pearson, J.N.H.
(1989) :

Human leprosy in normal mice.
Br. Med. J., 3 : 218.

Regaud, C. (1901) :

Etudes sur la structure des tubes seminiferes et
sur la spermatogenese chez les mammiferes.
Arch. Anat. Microscop., 4 : 101.
Quoted from Courot, M.; Hoghereau, M.T. and
Ortavant, R. (1970).

Reinherz, E.L.; Kung, P.C.; Goldstein, G. and Schlossman,
S.F. (1980) :

A monoclonal antibody reactive with the cyto-
toxic suppressor T cell subset previously de-
fined by a heteroantiserum termed TH₂.
J. Immunol., 124 : 1301.

Ridley, D.S. (1989) :

Reactions in leprosy.
Lepr. Rev., 40 : 77.

Ridley, D.S. (1977) :

Skin biopsy in leprosy, histological inter-
pretation and clinical application. In : Docu-
menta Geigy, Ciba-Geigy Ltd., Basle, Switzerland
p. 31.

Ridley, D.S and Jopling, W.H. (1986) :

Classification of leprosy according to immunity.

A five group system.

Int. J. Lepr., 34 : 225 .

Ridley, M.J. (1981) :

The mononuclear cell series in leprosy : an ultrastructural report.

Lepr. Rev., 52 : 35.

Ridley, S. (1985) :

The pathology of leprosy. In : Leprosy., 1st edition. Hastings, R. (ed). Churchill-Livingstone Press, New York. p.125.

Ritzen, E.M.; Hansson, V. and French, F.S. (1981) :

The sertoli cell. In : The Testis. Burger, H. and De-Kretser, D. (eds). Raven press, New York. p. 171.

Rolston, R.; Mathews, M. and Koshy, T.S. (1981) :

Hormone profile in lepromatous leprosy.

Int. J. Lepr., 49 : 31.

Rook, G.A.W. (1983) :

The immunology of leprosy.

Tubercle, 64 : 297.

Ruder, H.J.; Lorianx, D.L.; Sherins, R.J. and Lipsett, M.B.

(1974) :

Function in men with disorders of spermatogenesis.

J. Clin. Endocrinol. Metab., 39 : 244.

Saez, J.M. and Forest, M.G. (1979) :

Kinetics of human chorionic gonadotropin-induced steroidogenic response of the human testis.

J. Clin. Endocrinol. Metab., 49 : 278.

Saha, K. and Gupat, I. (1977) :

Immunoological aspects of leprosy, with special reference to the ASA.

Int. J. Lepr., 54 : 28.

Santen, R.J. (1977) :

Independent effects of testosterone and estradiol on the secretion of gonadotropins in man.

In : The Testis In Normal And Infertile Men.

Troen, P.; Nankin, H.R. (eds). Raven press, New York. p.558.

Santen, R.J. and Bardin, C.W. (1973) :

Episodic LH secretion in man : pulse analysis, clinical interpretation, physiologic mechanisms.

J. Clin. Invest., 52 : 2617.

Sara, J.; Brett, P.; Drapper, P.; Sheila, N.P. and Rees, R.J.W. (1983) :

Serologic activity of a characteristic phenolic glycolipid from *M. leprae* and tuberculosis.

Clin. Exp. Immuno., 52 : 271.

Sertoli (1985) :

Quoted from Fawcett, D.W. (1975).

Shepard, C.C. (1960) :

The experimental diseases that follows the injection of human leprosy bacilli into footpads

of mice.

J. Exp. Med., 112 : 445.

Shilo, S.; Livshin, Y.; Sheskin, J. and Spitz, I.M. (1981) :

Gonadal functions in lepromatous leprosy.

Lepr. Rev., 52 : 127.

Shell, R.S. (1984) :

Male reproductive system. In : Clinical And Functional Histology For Medical Students. Shell, R.S. (ed): Little, Brown and Co., Boston. p.185.

Steinberger, A. and Steinberger, E. (1977) :

The sertoli cells. In : The Testis, Advances In Physiology, Biochemistry And Function. Johnsen, A.D. and Gomes, W.R. (eds): Academic press, New York. p.371.

Steinman, R.M. and Nusseuzweig, M.C. (1980) :

Quoted from Rook, G.A.W. (1983).

Stoner, G.L. (1979) :

Importance of neural predilection of *M. leprae* in leprosy.

Lancet, 2 : 994.

Thangaraj, R.H. and Yawalkar, S.J. (1989) :

Evaluation of leprosy lesions. In : Leprosy For Medical Practitioners And Paramedical Workers.

Thangaraj, R.H. and Yawalkar, S.J. (eds): Ciba-Geigy Ltd., Basle, Switzerland. p.27.

Thorner, M.O.; Edwards, C.R. and Hander, J.P. (1977) :

Prolactin and gonadotropin interaction in male.

In : The Testis In Normal And Infertile Men:

Troen, P. and Nankin, H.R. (eds). Raven Press,
New York. p.351.

Timothy, R.C.; Joseph, R.D.; Daniel, A.H.; Louis, L.; Davids,

T. and Thomas, L.W. (1983) :

Rifampicin. In : Drug Facts And Comparison.

1st edition. Lipincott Co., Baltimore. p.1445.

Touw, J.; Langen Djik, E.M.J.; Stoner, G.L. and Belehu, A.

(1982) :

Humoral immunity in leprosy immunoglobulin G and
M antibody response to *M. leprae* in relation to
various patterns.

Infect. Immunol., 36 : 885.

Toyama, Y. (1976) :

Actin-like filaments in Sertoli cell junctional
specializations in the swine and mouse testis.

Anat. Rec., 186 : 477.

Tull, S. and Davis, M. (1972) :

Adjuvant-like activity of *M. leprae*.

Infect. Immunol., 6 : 909.

Uhanue, E.R. (1980) :

Cooperation between mononuclear phagocytes and
lymphocytes in immunity.

N. Eng. J. Med., 23 : 203.

Van Thiel, D.H.; Sherins, R.H. and Myers, G.H. (1972) :

Evidence for a specific seminiferous tubular factor affecting FSH secretion in man.

J. Clin. Invest., 51 : 1009.

Wade, W.H. (1940) :

Borderline tuberculoid leprosy.

Int. J. Lepr., 8 : 307.

Wall, J.R. and Wright, D.I. (1974) :

Antibodies against testicular germinal cells in lepromatous leprosy.

Clin. Exp. Immunol., 17 : 51.

Wallach, D.; Cottenot, F. and Bach, M.A. (1982) :

Imbalances in T cell subpopulations in lepromatous leprosy.

Int. J. Lepr., 50 : 282.

Walsh, G.P. and Meyers, W.M. (1981) :

Lepa-Zonosis.

Lepr. Rev., 52 : 77.

Walsh, P.C. (1977) :

Endocrine evaluation of the infertile male.

In : Male Infertility. Amelar, R.D.; Dubin, L. and Walsh, P.C. (eds). W.B. Saunders Co., Philadelphia, London, Toronto. p.153.

Wendorff-Van Diapen, T. (1982) :

Clofazimine-resistant leprosy.

Int. J. Lepr., 50 : 139.

Waters, M.F. (1984) :

Leprosy.

Med. Int., 5 : 214.

Wenambu, S.M.G. ; Turk, J.L. ; Waters, M.F.R. and Rees, R.J.W. (1968) :

Erythema nodosum. A clinical manifestation of Arthus phenomena.

Lancet, 2 : 933.

Wiersema, J.P. and Binford, C.H. (1972) :

The identification of leprosy among epithelioid cell granuloma of the skin.

Int. J. Lepr., 40 : 10.

Wong, T.W. ; Straus, F.H. and Warner, N.E. (1973) :

Testicular biopsy in the study of male infertility : I. Testicular causes of infertility.

Arch. Pathol., 95 : 151.

Wong, T.W. ; Straus, F.H. and Warner, N.E. (1974) :

Testicular biopsy in the study of male infertility : III. Pretesticular causes of infertility.

Arch. Pathol., 98 : 1.

Woodruff, A.W. (1979) :

Leprosy. In : Medicine In Tropics. 1st edition. Woodruff, A.W. (ed). The English Language Book Society and Churchill Livingstone, London. p. 301.

World Health Organization (1974) :

Memorandum on Immunological problems in leprosy research.

Lepr. Rev., 45 : 82.

World Health Organization (1982) :

Report of the study group on chemotherapy of leprosy for control programmes.

Technical report series WHO, 875: 80.

World Health Organization (1985) :

Epidemiology of leprosy in relation to control.

Technical report series WHO, 715 : 33.

World Health Organization (1987) :

WHO guidelines for skin smears.

Int. J. Lepr., 55 : 421.

Yawalkar, S. J. (1989) :

Prevalence of leprosy. In : Leprosy For Medical Practitioners and Paramedical Workers. 4th edition. Thangaraj, R.H. and Yawalkar, S.J. (eds). Ciba Geigy Ltd., Basle, Switzerland. p.15.

Yoder, L.; Naafs, B.; Harboe, M. and Bjune, G. (1979) :

Quoted from Harboe, M. (1980).

Young, D.B. and Buchanan, T.M. (1983) :

A serological test for leprosy with glycolipid specific for *M. leprae*.

Science, 22 : 1057.

ملخص البحث

لا يزال الجذام واحدا من أكبر المشاكل الصحية في البلاد النامية فيوجد أكثر من 17 مليون من البشر يعيشون في أقطار حيث توجد نسبة انتشار المرض أكثر من حالة لكل ألف من السكان .
وفي حالات الجذام العقدي قد تتأثر وظيفة الخصية وتفقد وظيفتها مما قد يؤدي الى العجز الجنسي .

ولقد أثبتت الدراسات أن ميكروب الجذام لديه القدرة على غزو نسيج الخصية مما قد يؤدي الى التهابات مزمنة بها قد تؤدي الى تحولها الى نسيج ليفي كامل .

وأثبتت الدراسات أيضا أن الهرمونات التي تفرزها الغدة النخامية للتحكم في وظيفة الخصية (FSH and LH) قد ترتفع في مرضى الجذام العقدي ووجد أيضا أن الهرمون الذكري (التستوستيرون) قد ينخفض بشكل ملحوظ في هؤلاء المرضى .

في هذه الدراسة قمنا بقياس التغيرات التي تحدث في هرمونات الغدة النخامية (FSH and LH) وكذلك الهرمون الذكري (التستوستيرون) في أمصال مرضى الجذام العقدي .

كذلك قمنا بدراسة التغيرات الباثولوجية بنسيج الخصية في المرضى الغير قادرين على التناسل وقد قسمت الحالات الى مجموعتين : —

أ — مجموعة تعاني من الجذام العقدي وقادرين على التناسل وعددهم 10 حالات كمجموعة ضابطة
ب — مجموعة تعاني الجذام العقدي وغير قادرين على التناسل وعددهم 10 حالة ، وقد أثبتت الدراسة مايلي : —

(١) ارتفاع هرمون ال (اف . اس . اتش) في جميع الحالات المرضية والضابطة .
(٢) ارتفاع هرمون ال (ال — اتش) في الحالات الغير قادرة على التناسل .
(٣) لم يوجد تغير ذو معنى احصائي في مستوى الهرمون الذكري في جميع المرضى الذين تم دراستهم .

(٤) تراوح تأثير الخصية بمرض الجذام ما بين وقف القدرة على تخليق الحيوانات المنوية الى تحولها الى نسيج ليفي كامل .

ويعزى سبب تأثر خلايا الخصية الى الاجتياح المباشر بميكروب الجذام أو التفاعل الناتج عن الإصابة أو

الاثنان معا .

بسم الله الرحمن الرحيم

"تقييم تأثير الجذام العقدي على النسيج الخصوي"

رسالة مقدمة

توطئة للحصول على درجة الماجستير في الأمراض الجلدية والتناسلية

من الطبيب

عصام السعيد عبید

تحت إشراف

أ.د. عاصم محمد فرج

أستاذ مساعد الأمراض الجلدية والتناسلية

كلية طب بنها

جامعة الزقازيق

أ.د. محمد زكي قناوى

أستاذ مساعد الأمراض الجلدية والتناسلية

كلية طب بنها

جامعة الزقازيق

د عادل محمد كمال

مدرس الأمراض الجلدية والتناسلية

كلية طب بنها

جامعة الزقازيق

كلية طب بنها

جامعة الزقازيق

١٩٩٢