From the Editor

Quantum leaps are made in biological sciences, IT, Communications, engineering and management systems. Medical science has taken some advantage of these developments, but not adequately and research has still to become a way of life at TLM. There are still many intractable and unsolved problems in leprosy, and if at all any one can find the answers, it is the TLM with its plethora of clinical material and a galaxy of professional staff. Surely, TLM can do outstanding and cutting edge research using the developments in other fields. Bionano technology, Stem Cell research are just a couple of areas, where applications to leprosy problems can significantly enhance the quality of life of affected people. We need to network and keep chipping away at the blocks of ignorance and sometime, hopelessness. The RRC was established as a facilitating body, and has built up a fairly good library, with a small core staff who are able, willing and ready to help; but the initiative has to come from the professional staff, project managers and hospital superintendents!!!. Why not use this God-given opportunity to give glory to Him? TLM staff must recognize their potential and the tremendous advantage they have over Government and other ILEP organizations, in making research a way of life to solve real life problems and to answer burning questions.

The Research Newsletter endeavours to bring something new to all its readers every quarter, focusing on few interesting papers, journal scan and an insight on the new research projects. We need your feedback to make this Newsletter more useful for you and interesting too.

And with this thought I bid adieu to RRC. My journey as the Editor of the research newsletter has been on the whole, a new learning experience. And I thank all our readers for their support and encouragement.

Adios. God bless you all

Dipti Ekka

MESSAGE

It is a pleasure to be invited to write for the TLM Leprosy research overview. This newsletter performs an important function in scanning the literature and picking up papers relevant to leprosy work. Leprosy research used to be quite separate, done in leprosy hospitals and published in leprosy centred journals. However with integration more leprosy research is taking place in collaboration with colleagues in other disciplines. This means that leprosy research is now published in a wider range of journals. This is part of the de-stigmatisation of leprosy and is an excellent sign that our work is becoming part of mainstream medical research. However it is now more of a challenge to follow leprosy research and it is excellent that the TLM RRC scans the research horizon for its readers and identifies papers that one might otherwise miss. Furthermore although many people working in leprosy clinics and hospitals have internet access, often it is so slow that obtaining papers is often a slow and frustrating task. In addition papers are often published in specialist journals that require a subscription for access. So the authors of the TLM Research review provide a real service by identifying papers and then accompanying them with useful comments on the quality of the paper and the relevance of the research. This quarter newsletter contains a typical mix of interesting and unusual papers, some of which will make us reflect on our practice. Do supplement this digest with a quick dip into Leprosy Review which continues to be the main journal for definitive Leprosy research.

Dr. Diana Lockwood
Professor of Tropical Medicine
London School of Hygiene & Tropical Medicine
Leprotic cervical spondylodiscitis.

*Eur Spine J. 2010 Apr 7*

Kim SJ, Lee TH, Shin JJ, Chae GT.

Leprosy is a chronic infectious disease caused by the Mycobacterium leprae that leads to leprosy neuropathy involving the peripheral nerve and several characteristic skin lesions. Skeletal involvement can occur in peripheral joints, such as the wrist and the ankle. However, there is no report of an axial leprotic lesion involving the spine or paraspinous soft tissue. The authors report the first case of a leprotic cervical lesion involving the axial skeletal system. A 48-year-old male presented with neck pain and severe pain in the right suprascapular area and left arm. Preoperative MRI of the cervical spine revealed signal changes in the prevertebral soft tissue at the level of the C3, 4, 5 vertebral bodies. There were a lower signal intensity on T1-weighted image and high signal intensity on T2WI of the bone marrow at the level of the C5 and C6 vertebral bodies, and a C5/6 segmental ossification of the posterior longitudinal ligament. There were herniated disc on the left C5/6 with C6 root and the right side of C6/7 with C7 root compression. He was previously diagnosed with leprosy when he was 14 years old and received treatment intermittently over the course of 7 years. But patient did not disclose his past history. Surgical intervention was conducted using an anterior cervical approach. An incision was made in the anterior longitudinal ligament at C5/6, and a pinkish gray friable gelatinous material was observed on the C5/6 disc and on the anterior lower one-third surface of the C5 vertebral body. Specimens were obtained and subjected to pathological evaluation and microbiological culture. After C5/6 and C6/7 discectomies, nerve root decompression and autologous iliac bone grafting were performed at the C5/6 and C6/7 levels. The C5-6-7 vertebrae were fixed with an Atlantisc(R) cervical locking plate and a screw system. The pathological report indicated chronic inflammation with heavy plasma cell infiltration on the specimen. The specimens were sent to the Institute of Hansen’s Disease, and polymerase chain reaction for leprosy tested positive. After surgery, his pain disappeared and he was given a prescription for antileprotic drugs. The authors describe the first case of leprotic cervical spondylodiscitis that was operatively treated in a 48-year-old patient with known leprosy history of 14 years.

A major gene controls leprosy susceptibility in a hyperendemic isolated population from north of Brazil.


Leprosy is a chronic infectious disease that affects 250,000 new individuals/year worldwide. Genetic analysis has been successfully applied to the identification of host genetic factors affecting susceptibility to leprosy; however, a consensus regarding its mode of inheritance is yet to be achieved. A complex segregation analysis (CSA) was conducted on leprosy using data from the Prata Colony, an isolated, highly endemic former leprosy community located at the outskirts of the Brazilian Amazon. The colony offers large multiplex, multigenerational pedigrees composed mainly by descendants of a small number of original leprosy-affected families. The enrollment strategy was complete ascertainment leading to the inclusion of the whole colony (2005 individuals, 225 of whom were affected) distributed in 112 pedigrees. CSA was performed using REGRESS software. CSA identified a best-fit codominant model, with a major gene accounting for the entire familial effect observed. The frequency of the predisposing allele was estimated at 0.22. Penetrance for homozygous individuals for the predisposing allele >30 years old ranged from 56% to 85%, depending on sex. It was concluded that a strong major gene effect in the isolated, hyperendemic Prata Colony indicates enrichment of genetic risk factors, suggesting a population particularly suitable for leprosy gene identification studies.
WOMEN AND LEPROSY

Assessment of needs and quality care issues of women with leprosy

Lepr Rev (2010) 81, 34–40
A. S. John, PSS Rao, Sonali Das

Leprosy causes not just physical but psychosocial and economic problems which are further magnified in women due to gender disadvantages especially in developing countries. In order to determine the needs and quality care issues of women leprosy patients attending a hospital/health care facility this research project was done. All women leprosy patients attending a Leprosy Referral Hospital in Kolkata, India in 2006 were interviewed in depth and clinically assessed, using a standardised proforma. Of 104 women studied, half below 40 years of age and 70% above 40 years, had visible disability & some had diabetes, low back pain etc. Nearly 60% preferred to hide their disease but even so, some had social problems. It was concluded that hospitals can do much to address the needs of women leprosy patients and provide quality services. National programmes should give a higher priority to offering culturally acceptable health education to promote early reporting.

Social problems of women leprosy patients-a study conducted at 2 urban leprosy centres in Delhi.

Kaur H, Ramesh V.

Leprosy seems to afflict women less commonly than men, but for cultural reasons this difference may be more apparent than real. This study, carried out at the Urban Leprosy Centres of Safdarjung Hospital and Dr. Ram Manohar Lohia Hospital in Delhi, showed that the impact of stigma attached to leprosy had more effect on educated women belonging to a higher socioeconomic group than on less fortunate women. Fear of social ostracism prevented the disclosure of disease to the community. Deformities and disabilities led to a deterioration in their functional capabilities and their psychological state of mind. Pregnancy did not affect regularity of treatment. Many women needed an escort to attend the clinic. Solutions to minimize some problems have been suggested.

Male-female (sex) differences in leprosy patients in south eastern Nigeria: females present late for diagnosis and treatment and have higher rates of deformity.

Peters ES, Eshiet AL.

A study was done to investigate the possibility that female leprosy patients in South Eastern Nigeria may be at a disadvantage with regard to early presentation for diagnosis and the prevention of disability. A hospital-based retrospective examination of case notes for the period 1988–1997 was undertaken, totalling 2309 adult patients of whom 1527 were male and 782 were female (2.1 male : female ratio). Data were collected on 1) the clinical type of leprosy, 2) the interval between the onset of symptoms or signs and presentation for diagnosis and treatment and 3) the patterns of physical deformity/disability. The results indicated that this in part of Nigeria, female leprosy patients have a much longer period (duration of illness) between first symptoms or signs and presentation for diagnosis and they suffered a higher proportion of disabilities.

Gender differentials in the social impact of leprosy.

Rao S, Garole V, Walawalkar S, Khot S, Karandikar N.

This paper investigates social impact with special reference to gender differentials. Data obtained from structured questionnaires was analysed. It was observed that the initial delay in identifying the skin changes as the symptoms of the disease were higher for females (29 months) than males (24 months). Even after identifying the symptoms, women were observed to depend exclusively on nonmedical treatment for a longer period (10 months) than males (6 months). Females were observed to be more compliant than males, but the benefits of regularity appeared to be outweighed by the initial delay in starting medical treatment. The social impact on daily life was more severe for females than males. The paper highlights implications of gender bias on detection and treatment, and suggests modifications for control programmes.
JOURNAL SCAN

Leprosy Review 81(1), March 2010

- The efficacy of a four-week, ofloxacin-containing regimen compared with standard WHO-MDT in PB leprosy - M. F. Balagon, R. V. Cellona, R. M. Abakos, R. H. Gelber and P. R. Saunderson

- Assessment of needs and quality care issues of women with leprosy - A. S. John, P. S. S. Rao and S. Das

- The effect of corticosteroids usage on bacterial killing, clearance and nerve damage in leprosy; Part 3 – Study of two comparable groups of 100 multibacillary (MB) patients each, treated with MDT + steroids vs MDT alone, assessed at 6 months post-release from 12 months MDT - V. P. Shetty, F. A. Khambati, S. D. Ghate, G. D. Capada, V. V. Pai, R. Ganapati

- Leprosy presenting as immune reconstitution inflammatory syndrome: proposed definitions and classification - P. Deps, D. N. J. Lockwood

- Perceived social restriction in leprosy-affected inhabitants of a former leprosy colony in Northeast Brazil - H. Lesshaftt, J. Heukelbach, J. C. Barbosa, N. Rieckmann, O. Liesenfeld, H. Feldmeier

- Immigration and Human rights in leprosy - D. Soutar

- Gold weight implants in the management of lagophthalmus in leprosy patients - E. E. Toukhya

NEW RESEARCH PROJECTS IN 2010

Please to announce the collaboration between TLM and ICMR. This is the first time that the TLM superintendents are being the principle investigators for these new projects:

- Impact of SGH's for leprosy affected in Chhattisgarh (Swedish Medical Council) - Dr. PSS Rao, M. S. Raju

- Methods to Enhance Voluntary Early Reporting - Dr. Joy Deepa

- Development of Community based methods to prevent defaulting of MDT and steroid therapy in Leprosy - Dr. Elkan

- Development of population based leprosy Registry (GPLR) & New Case Detection Strategies to eradicate Leprosy in Urban areas - Dr. Selvasekar Abraham

- Eliminating 4Ds in Leprosy (Delay, Defaulting and Dehabilitation) - Dr. M. S. Raju

- Disability profile and Socio Economic Status, its causes and consequences in Leprosy colonies of golden triangle Mumbai, Pune and Nashik - Krupa A. Maseji

- A longitudinal cohort study to identify immunological biomarker for leprosy - Dr. Rupendra Jadhav, Dr. Vijayalakshmi

- Study of environment Mycobacterium leprae and transmission link in leprosy - Dr. Rupendra Jadhav, Dr. Mannam Ebenzer

PROJECTS PROGRESS REPORT

AZATHIOPRINE STUDY:

Ongoing double blinded clinical trial in Champa, Shadhara, Purulia, Faizabad; 343 patients have been recruited till now. This study is going strong and soon the recruitment will be completed.

NUTRITIONAL STUDY:

This study to assess the nutritional status of the leprosy patients has been completed and the analysis is being done.

CARRELS:

Intervention phase of the multicenteric study is almost complete & post intervention evaluation is being initiated, which gives the impact of the study in quantitative terms with methodology to replicate in similar conditions.

DID YOU KNOW ???

- Driving can increase the posterior hippocampus of your brain
- Cold winter weather may improve your memory and concentration
- Dreaming helps us remember and learn from experiences.
- The longest living cells in the body are brain cells which can live an entire lifetime
- Our eyes are always the same size from birth, but our nose and ears never stop growing.