

M.leprae to a point suitable for application in large scale epidemiological studies.

* This work is funded by the European Commission as part of the INCO-DC programme and include partners from the University of Aberdeen and University College of London in the UK, the Royal Tropical Institute in Amsterdam (The Netherlands), the Armauer Hansen Research Institute in Ethiopia, the University of Bergen in Norway and the Richardson Leprosy Hospital in Miraj (India).

Stanley Browne Laboratories, Richardson Leprosy Hospital, Miraj - 416 410, Sangli District, Maharashtra

Phone : 0091-233-211213

Fax : 0091-233-211708

Email : sblabtlm@vsnl.com

Mo 91

CONFIRMATION OF DIAGNOSIS IN DIFFERENT FORMS OF LEPROSY BY PCR AND GENE PROBES

V.M.Katoch, H.B.Singh, K.Katoch, M.Natarajan, V.D.Sharma, D.Singh, R.Das, D.S. Chauhan & K.Srivastava Central JALMA Institute For Leprosy, Agra

The development of PCR assays for detection of M.leprae directly from clinical specimens was expected to provide a major help to improve the diagnostic capabilities. Over the last 5-7 years our laboratory has used various DNA as well as in-house standardized rRNA targeting PCR methods as well as rRNA targeting probes for the detection of M.leprae in the clinical specimens (mainly biopsies). Various clinical groups included in these studies are well established clinical forms, indeterminate as well as suspicious cases. DNA as well as rRNA from the biopsy specimens were extracted by a physiochemical procedure adapted at the laboratory. Besides assessing the hybridization with rRNA targeting probes, PCR assays using different gene targets were performed by established systems. Analysis shows that RNA probes are mainly relevant in MB cases (including low bacillated specimens) as well as a section of PB specimens for monitoring of treatment. On the other hand, different PCR assays were constantly found to be useful in early atypical forms with positivity ranging from 50-70% in these specimens in different series of patients investigated in the laboratory. The need to have PCR laboratories (may be at least in referral centres/institutes) needs to be seriously considered for improving the diagnostic capabilities in the new millennium.

Central JALMA Institute For Leprosy, Tajganj, Agra - 282 001 Phone : 0091-562-331751 - Extension 206

Fax : 0091-562-331755

Email : useng@nde.vsnl.net.in

Mo 210

APPLICATION FOR PCR ASSAYS TO RELAPSED LEPROSY CASES

H.B.Singh, V.D.Sharma, K.Katoch, M.Natarajan, A.Shakya, Archana, D.Singh, R.Das, D.S.Chauhan, K.Srivastava & V.M.Katoch Central JALMA Institute For Leprosy, Agra

PCR techniques have been earlier reported to be correlated with viability in leprosy and other diseases. We had observed similar trends earlier. From our earlier studies as well as some published reports it has been inferred that PCR assays can be used to monitor the progress of leprosy cases under treatment and also relapsed cases. However, as the disease profile is constantly changing, there is need to continue these studies using different PCR methods. In this extended study, the biopsies from clinically relapsed leprosy cases have been processed for extraction of nucleic acids. A DNA targeting PCR assays described by Hartskeerl et al (36 kDa) and Pattyn/ Cox et al (rDNA) have been used to investigate these specimens. PCR product was analysed on the agarose gels as well as by southern blot hybridization. Positive amplification was observed in majority of the specimens which belonged to paucibacillary spectrum. All the multibacillary specimens were PCR positive by both the methods. Better sensitivity with probe hybridization was observed. PCR method targeting 36 kDa was found to be more sensitive than the rDNA targeting method of Cox/ Pattyn et al. Overall, both the PCR techniques appear to be useful for investigating the relapsed leprosy cases currently coming to clinics.

Central JALMA Institute For Leprosy, Tajganj, Agra - 282 001 Phone : 0091-562-331751 - Extension 206

Fax : 0091-562-331755

Email : useng@nde.vsnl.net.in

Di 19

DELAYS IN PRESENTATION FOR TREATMENT IN LEPROSY

Donald Benjamin, The Leprosy Mission Hospital, Allahabad

Objectives : To prevent disability amongst those affected by Leprosy and encouraging them for early presentation and treatment.

Design : Prospective Observational study. 30 new cases were interviewed, assessment done clinically and bacteriological. The data included demographics, first symptom and individual patients first action behavior, etc.

Setting : Out patients Department, The Leprosy Mission Hospital, Naini, Allahabad

Participants : Out patients visited to Hospital first time.

Results : Looking at delays and now presenting for treatment at hospital was resulted that deformity was more. 11 cases (36.66%) Grade II, 8 cases (26.66%) Grade I, 11 cases (36.66%) no deformity.

Conclusion : Since delay is associated with increased disability, we need to bring significant changes in attitude of people living in rural areas and far from Leprosy Hospital, should go and contact nearby hospital. Our study identified the major causes of delay and allow us to plan an appropriate multi media campaign for the awareness of Leprosy. This will help in early diagnosis and treatment to prevent any disability.

The Leprosy Mission Hospital, Naini, Allahabad - 211 008, Uttar Pradesh Phone : 0091-532-697267

Fax : 0091-532-697262

Email : tlmnaini@nde.vsnl.net.in

Di 21

EXPERIENCES OF USE OF PREDNISOLONE IN PREVENTION OF NEURITIS AND DEFORMITY IN LEPROSY CASES

Dr.Mukesh Bhachawat & Dr.K.L.Bhandankar, Indore

The advantage of Prednisolone has been well documented in previous literature. However, the use of drug, for want of proper monitoring and follow-up, has not come up with expected results.

The present study describes about the 100 cases selected for study, who were put on Prednisolone in field situations with MDT or after MDT was over.

As was expected, the results will be uniform in nature but it was observed that out of the 100 cases, only 15% of the cases were benefitted, 20% partially benefitted but the rest were not benefitted at all.

The objective of the study was to know the gravity of the problem in cases under study and also to know factors responsible for the unsatisfactory results. Whether those were either due to improper selection of cases or lack of proper training on the part of programme managers or either due to improper dose or due to improper follow-up activities.

The study was definitely given an insight to look into the problem and also has initiated the programme manager to give sufficient attention to this component also.

D/81 Shopping Complex, A.B.Road, Opposite Dainik Bhasker Press, Indore, Madhya Pradesh

Phone : 0091-731-575098 (O), 557886 (R)

Fax : 0091-731-552396

Di 42

DEFORMITY AND GENDER

Dr.V.V.Dongre & M.S.Raju Gandhi Memorial Leprosy Foundation, Wardha, Maharashtra

In order to know the influence of gender on incidence and profile of deformities, a retrospective analysis of all the 4047 cases registered in GMLF Leprosy control unit at T Narsipur since its inception was carried out. The patients were categorised into G0, G1, G2 as per WHO classification.

The results show that, 9% of the total cases developed G1 deformities and 6.2% developed G2 deformities. Among males, 7.8% and 3.7% among females developed G2 deformities. While flexion of both the hands is the most common among the males (5.5% of those deformed), clawing of right finger is the most common among females to the extent of 5.8% of G1 + G2. Flexion of both the hands and absorption of all the fingers take 2nd position to the extent of 5.1% among females, whereas absorption takes second position among males to the extent of 4%. Comparatively lesser percentage of females with multiple cases (16.1%) developed deformities, whereas the same is 22.6% among males. Maximum of those developed deformities among males are of LL type cases (36.4%) while the same are of BL type (66.7%) among females.

The paper also presents detailed analysis of various factors that are associated with deformity, and this variation in both the genders, which are presented in the full length paper.

Gandhi Memorial Leprosy Foundation, Ramnagar, Wardha - 442 001, Maharashtra Phone : 0091-7152-42627

Fax : 0091-7152-40111

Email : msraju@nagpur.dot.net.in

Di 94

INVOLVEMENT OF COMMUNITY VOLUNTEERS FOR AUGMENTING 'POD'SERVICES IN RURAL AREAS - PRELIMINARY OBSERVATIONS

S.Kingsley, V.V.Pai, C.R.Revankar, U.Thakar & R.Ganapati Bombay Leprosy Project, Mumbai

Prevention of Disabilities (POD) in leprosy is a very continuous process that requires special technical skills to be meticulously applied using appropriate materials to achieve the goal. However this has not been widely practised along with routine MDT programmes, particularly in rural areas mainly due to operational reasons and limitations in transfer of technology to the grass root level leprosy workers. There is a need to overcome these difficulties by involving the volunteers derived from the community and to inte-

grate the POD services along with the routine leprosy programme. Bombay Leprosy Project (BLP) has implemented a POD programme using the simple techniques developed by the project through the community volunteers (CVs) who delivered POD services at the doorstep of leprosy patients in urban slums. This urban POD programme proved to be highly feasible and cost-effective. Based on this experience, we attempted to extend similar programme in rural areas adjoining Bombay to practise POD using community volunteers.

For logistic reasons, we have chosen two rural districts namely Thane & Raigad in Maharashtra, which are easily accessible from Bombay to implement this programme. The coverage of population was defined with the object of epidemiological analysis after the follow-up. The local leprosy workers were given task-oriented training on simple techniques of POD services. CVs from the same locality were identified and given simple task specific training. All risk group cases were assessed periodically for POD services initiated by the leprosy workers. CVs offered services at the doorstep of patients and ensured treatment compliance. Material supplies for providing POD services were made available on regular basis. Service delivery was planned and implemented through the community volunteers. Monitoring the progress of disability status using simple grading system was done at regular intervals.

Continued on next page District Location No. of leprosy Population No. of disabled patients workers & CVs adopted identified and served

Bombay R-Ward (semi-urban) 12 300,000 159

Thane Ulhasnagar 3 200,000 29

Dombivili 3 200,000 45

Raigad Panvel Taluka 11 100,000 71

Uran Taluka 10 100,000 148

It is observed that the transfer of technology would be possible if the techniques and the components of POD services are simple. The involvement of CVs who can act as a catalyst between the leprosy worker and the leprosy patients will ease the logistic problems prevailing in the rural areas.

Bombay Leprosy Project, Sion-Chunabhatti, Mumbai - 400 022 Phone : 0091-22-5220608, 5223040

Fax : 0091-22-5296486

Email : bomlep@bom5.vsnl.net.in

Di 112

HELPING DISABLED LEPROSY PATIENTS WITH ADL - ASSESSMENT

Joy Mancheril, Hemant P.N., Ebenezer J & A.A.Samy, ALERT-INDIA, Mumbai

Leprosy cured persons with deformity or disabilities due to leprosy look forward to a normal day-to-day living. It is a known fact that misuse and disuse of insensitive and paralytic limbs are the main cause for deterioration of deformities and disabilities. The activities of daily life and the occupation of the patient are greatly altered by the type and gravity of their deformity and disability. The study examines the relationship between the ADL and the type and severity of deformity.

Specifically the study examines 209 leprosy patients with Grade-II deformities on the basis of International Classification of Impairments, Activities and Participation (ICIDH - 2 - WHO 1997). It outlines the ADL (Activities of Daily Life) of the patients in terms of self care, work and leisure activities and relative impact on the deformities and disabilities. Further, the study analyses the role and the impact of the socio-economic factors on their daily life. It suggests deformity related remedial steps for their ADL - to prevent further deterioration of their condition.

ALERT-INDIA, B-9 Mira Mansion, Sion (West), Mumbai - 400 022 Phone : 0091-22-4033081, 4033082

Fax : 0091-22-4072558 Email : byelep@iname.com

Di 148

IMPACT OF STEROID THERAPY IN PREVENTING DISABILITIES IN LEPROSY - A FIELD EXPERIENCE

A.B.Prabhavalkar *, *S.Kingsley* #, *C.R.Revankar* # & *R.Ganapati* # * Directorate of Health Services, Alibag, Maharashtra # Bombay Leprosy Project, Mumbai

The advantage of using corticosteroids (prednisolone) in leprosy for preventing the disabilities outweighs the risk of being used by the para-medical staff under medical supervision following task-oriented training. The consequences of reaction commonly result in irreversible nerve function impairment, if not identified and treated adequately with steroids. Several researchers have recommended the use of standard regimen for steroid therapy for field use by the para-medical workers. We initiated a study as a part of our POD programme being implemented along with the routine MDT programme giving more emphasis to identify and treat reactions with neuritis at the field level.

A field based POD programme was implemented in Raigad District, where the Government of Maharashtra is doing the basic leprosy control work. All field level staff were given orientation in identifying and treating reactions / neuritis with steroids. 48 leprosy patients with signs of reaction (acute neuritis) were included in the study of which 31 patients also had early or partial nerve function impairment. While 77% of the patients were male, 25% of them were children. All

patients were treated with standard course of steroid therapy recommended by WHO (1998). Initial clinical and neurological findings were recorded and the patients were subjected to reassessment at monthly intervals.

52% of the patients with early nerve function impairment showed complete sensory recovery, while 35% had shown partial improvement. The motor recovery was significantly greater among patients with lagophthalmos and foot drop (69%) compared to those who had claw hand and thumb deformity (33%). 62% of patients with early claw hands improved partially. In none of the patients nerve function deteriorated. Nerve pain completely diminished within two weeks of treatment. No serious or permanent side-effects were noticed.

We will present the limitations of standard steroid therapy and its operational shortcomings. The increase in compliance of treatment by the leprosy patients and its acceptance by the field staff will be discussed. The factors such as training of para-medical workers, their motivation and the feasibility of monitoring the effectiveness of steroid therapy will be presented in detail. We conclude that the standard steroid treatment can be effectively practised at the field along with the routine MDT programme, which will immensely help to eliminate the social stigma about leprosy.

Bombay Leprosy Project, Sion-Chunabhathi, Mumbai - 400 022 Phone : 0091-22-5220608, 5223040

Fax : 0091-22-5296486

Email : bomlep@bom5.vsnl.net.in

Di 163

RELATIONSHIP BETWEEN GRIP STRENGTH, PINCH STRENGTH AND BASIC ACTIVITIES OF DAILY LIVING IN LEPROSY PATIENTS

Paul Raj Kumar P, Farah Lenin, Caroline Prasanna & Punitha E

Schieffelin Leprosy Research And Training Centre, Karigiri, Vellore District,

Tamil Nadu

The objective of this paper is to determine the relationship between grip strength, pinch strength and basic activities of daily living (BADL) rating in leprosy patients.

It is a retrospective and cross-sectional study of the hand function and BADL respectively, done in the occupational therapy department of the Schieffelin Leprosy Research and Training centre, Karigiri.

The subjects are the in and out-patients with normal vision but having motor nerve function impairment and not having any absorption of digits or ulcers in one or both the hands, who were either under drug therapy and / or relieved from medical rehabilitation.

The main outcome measures were grip strength which was measured using the baseline hydraulic hand dynamometer (equivalent to Jamar dynamometer, USA), pinch strength was measured using Jamar pinch gauge (USA) and BADL assessment was done using Karigiri's Activities of daily living rating system

The percentage of patients who scored less in BADL and whether or not the grip strength and pinch strength are considered as the key factors contributing to the problems in BADL and the relationship between grip strength, pinch strength and BADL rating will be presented and discussed.

Schieffelin Leprosy Research And Training Centre, Karigiri - 632 106, Vellore District, Tamil Nadu

Phone : 0091-416-274229

Fax : 0091-416-274274

Di 216

FORM AND FUNCTIONAL RECOVERY AMONG LEPROSY PATIENTS WITH PARALYTIC DEFORMITY AND DYSFUNCTION - THE ROLE OF CORTICOSTEROIDS?

Sugumaran D.S.T., Arunthathi S & Sunila Anbarasu
Schieffelin Leprosy Research And Training Centre, Karigiri, Vellore District, Tamil Nadu

Form and function appear to be mutually complementary for many organs. This phenomenon especially appears to be relevant to leprosy related nerve damage which causes paralysis of certain groups of muscle resulting in muscle imbalance leading to deviation from the normal form - a deformity. These deformities are not only cosmetically abnormal but also lead to dysfunction or a disability. Timely intervention with corticosteroids in the proper dosage and duration helps to restore normal form and function. We inducted for our study 108 leprosy patients with 194 visible paralytic deformities of less than one year-duration (ULNAR-101, MEDIAN-41, LATERAL POPLITEAL- 36, FACIAL- 15, RADIAL- 1). The duration of steroid was individualized according to response. The starting dose of the steroid (Tab.Prednisoione) was 60 mg per day and duration varied from 5 months to 24 months. We present our results which were very gratifying since benefit accrued to the majority of the patients. Improvement of ulnar nerve was 52%, median 68%, lateral popliteal 61% and facial 80%. Females showed better recovery of nerve function than males (Female 71%, Males 56%). Contrary to previous observations, older age group showed better recovery than the younger ones (11-40 years of age = 52%, 41-70 years of age = 79%). Our findings will be presented with tables and figures.

Schieffelin Leprosy Research And Training Centre, Karigiri - 632 106, Vellore District, Tamil Nadu

Phone : 0091-416-274229

Fax : 0091-416-274274

Di 227

THE EPIDEMIOLOGY OF NERVE FUNCTION IMPAIRMENT IN LEPROSY -AN UPDATE

Dr. Wim H.van Brakel New Delhi

Purpose : To give an update on the epidemiology of nerve function impairment (NFI) in leprosy.

Methods : A review of current and recent literature reporting on studies with 100 or more subjects from MDT programmes. Some previously unpublished data from a leprosy control programme in western Nepal are also included. Prevalence data and data on the results of steroid treatment are presented as percentages; incidence as rates per 100 person-years at risk (PYAR).

Results : Depending on the country and the programme, 16-56% of newly registered patients already have clinically detectable impairments (WHO grade 1+2), often no longer amenable to drug treatment. Among new patients, 6-27% present with secondary impairments (WHO grade 2), such as wounds, contractures and shortening of digits, usually preventable consequences of the autonomic, sensory and/or motor neuropathy. Among MB patients, who form the majority of new cases in some countries, the percentage is even higher: 33-56%. Incidence rates for nerve function impairment (NFI) per 100 PYAR have been reported as 1.3-3.5 for PB and 7.5-24 for MB during and after MDT. Sensory impairment with rates ranging from 0.9-2.7/100 PYAR in PB and 13-18.5/100 PYAR in MB, is more common than motor impairment, which has been reported ranging from 0.4-1.3/100 PYAR and 7.5-9.4/100 PYAR in PB and MB, respectively. When detected and treated in time with corticosteroids, the primary impairments may be reversible. However, a substantial proportion of patients (11-51%) does not recover or gets worse. In recent studies only 29-42% recovered fully. There are some data showing that around 10% of PB patients and one third or more of MB patients have impairments resulting from neuropathy at release from treatment.

Conclusions : Neuropathy (NFI) is still a very common complication of leprosy, occurring both before treatment, during MDT and after release from treatment. Even after successful treatment a very substantial proportion of people will continue to suffer from neuropathy and its consequences. Efforts at prevention of neuropathy and the secondary impairments resulting from it should be continued and strengthened.

C/o.TLM India, CNI Bhavan, 16 pandit Pant Marg, New Delhi - 110 001 Phone : 0091-11-3716920

Fax : 0091-11-3710803

Email : wvbrakel@iname.com

Di 417

MULTIDISCIPLINARY MANAGEMENT FOR PREVENTION OF DISABILITY IN THE PATIENT WITH INSENSITIVITY

Stephen A.Ashford Premananda Memorial Hospital, Calcutta

In the field of leprosy rehabilitation, a number of common impairments are seen, one of these is the insensitive or anaesthetic foot. Insensitivity in the foot is caused by damage to the posterior tibial, nerve. This lack of feeling can lead to risks of injury when an individual is engaged in every day activities, e.g. walking (Watson, 1886). Associated with insensitivity of the foot is the autonomic function, which is also lost when the nerve is damaged. This leads to the skin being dry and liable to crack. In leprosy, it is also common to get motor impairment due to nerve damage, which causes paralysis and weakness of muscles. Associated with the insensitive foot, it is also common to get foot drop, of inability to dorsiflex the foot, which thus produces alterations in biomechanics (Wanen 1999).

Two cases of patients with insensitive feet are presented. The first case is that of Ravi, a 32 year old man, who is unemployed and lives in a leprosy colony. He has been successfully treated for his leprosy with multi-drug therapy (MDT) and is now cured. However, during the course of his disease, he has lost sensation and autonomic function in both his feet. The muscles which work to dorsiflex his foot have also been affected so that he now has foot drop. These, along with many other factors caused him to develop a neuropathic right foot. This proved very difficult to manage even though different members of the hospital team worked with him.

The second case is that of Sai, a 28 year old man, who is the owner of a small retail business. He has also been treated successfully for leprosy with MDT and is also now cured. Unfortunately, he had sensory and motor damage to his right foot during the course of the leprosy. He is now unable to feel his right foot or dorsiflex it. As a result of this and other factors, he now has a neuropathic foot. The foot problem is also responsible for causing social problems and other functional disability for Sai.

Prevention of disability education in leprosy patients is a key responsibility of all members of the team. Those providing education should involve the patient and indeed make him or her the central member of the team. The concept of team or multidisciplinary working is key when treating and rehabilitating leprosy. Neuropathic disintegration of the foot is a multi-factorial condition, and should be approached as such (Warren, 1999). Management of insensitive feet should begin early with full assessment of all issues related to preventing injury to the foot (Watson, 1986, Brand, 1966).

Premananda Memorial Hospital, 259-A, Acharya Prafulla Chandra Road, Manicktala, Calcutta - 700 006

Phone : 0091-33-3509500

Fax : 0091-33-3506072

Email : steve-emma@england.com

Di 179

USE OF THE EYES, HANDS, FEET (EHF) SCORE AS AN IMPAIRMENT SEVERITY SCORE

Wim H van Brakel, Naomi K.Reed & Darren S.Reed
INF Release Project, Pokhara, Nepal

Objectives : To discuss the concepts of classification and severity grading in relation to impairment in leprosy, and to describe the use of an impairment sum score, the Eyes, Hands, Feet (EHF) score, as an indicator of the severity and the evolution of impairment over time.

Design : Retrospective cohort study. The use of an impairment sum score, the EHF score, is illustrated using data on impairment at diagnosis and after a two-year interval obtained in a cohort of 706 leprosy patients. The 1988 WHO disability grading scale (0-2, for both eyes, hands and feet - six sites) was used as a measure of impairment. For the analysis, the WHO grades for the six sites were summed to form an Eyes, Hands, Feet (EHF) score (minimum 0, maximum 12). The sensitivity to change over time of the EHF score was compared with that of the method of maximum grades.

Setting : Field MDT clinics in the Western Region of Nepal.

Participants : MB patients released from MDT.

Main outcome measures : Severity of impairment according to the WHO maximum grade and the EHF score; percentage of patients with a given impairment status; percentage of patients showing improvement, no change or deterioration according to the WHO maximum grade and the EHF score.

Results : Using the method of maximum grades, 509/706 patients (72%) appeared not to have changed in impairment status versus only 399 (57%) with the EHF score. Improvement or deterioration of impairment status was missed in 113 patients (16%). In 216/706 patients (31%), the changes detected with the EHF score were bigger than those revealed by the method of maximum grades.

Conclusions : The six components of the WHO disability grading may be added up to form a E(yes)H(ands)F(eet) sum score of impairment. This score can be used to monitor changes in impairment status in individual or groups of patients. It should be recorded and reported at least at diagnosis and release from treatment. Reporting could be done as the proportion of patients with improved EHF score, stable

EHF score and EHF score worse, and proportion of patients without impairment, proportion with WHO grade 1 and proportion with WHO grade 2.

INF Release Project, P.O.Box 5, Pokhara, Nepal Phone : 00977-61-21083

Fax : 00977-61-20430

Email : wvbrakel@iname.com

Di 180

NERVE FUNCTION STATUS OF PATIENTS TREATED FOR NERVE FUNCTION IMPAIRMENT UNDER PREVENTION OF DEFORMITIES (POD) PROGRAMME IN AN URBAN LEPROSY PROJECT

P.V.Ranganadha Rao, B.Pratap Reddy, Sukumar Samson, Tilak S.Chauhan, Dinkar, D.Palande, Anil Kumar & Ramesh Kumar Secunderabad

A Prevention of Deformities (POD) programme was introduced in a MDT programme of an Urban Leprosy Project of LEPRA India at Hyderabad. Under this programme, 1729 patients were assigned a risk grade of developing deformity and treated under POD. They were followed up through a standardized Nerve Function Assessment. The process involved detection of nerve function impairment at the earliest stages and administration of appropriate treatment for improving nerve function or containing the nerve damage. 459 patients showed impairment through this process. Nerve function assessment is done at the end of three years through the standardized procedure as a follow-up study to assess the nerve function status among these cases.

223 such patients were re-examined and nerve function status is recorded. The sensory perception of hands and feet are analyzed separately. Further improvement of sensory perception was recorded in 58% of hands and in 37% of the feet. 21 patients developed new ulcers during these three years.

P.B. No.1518, Krishnapuri Colony, West Marredpally, Secunderabad - 500 026 Phone : 0091-40-7802139, 7807314

Fax : 0091-40-7801391

Email : vrp@lepra-india.org

Di 197

CLCP'S DISABILITY MANAGEMENT PROGRAMME (DMP) - A NEW MULTIPURPOSE SOFTWARE

Atul Shah & Neela Shah Comprehensive Leprosy Care Project & Medical Aid Association, Mumbai

Built around the key modalities of disability preven-

tion and disability care services practised by our project for over a decade, the software works by feeding of twdsimple data forms provided with it, one for patients details and other for disability services rendered. Remark feature makes it convenient for data analysis from suspect to confirmed, MDT to RFT (including left area, defaulters, died). The Comments feature allow for storing your own notes, which appear in the history sheet of the patient. The disability charting (grade 0 to 2) at registration, at present and its improvement in any patient makes it a useful tool for public health persons to physiotherapists and surgeons to analyse the results. Integration of leprosy services with public health will also need close monitoring of the disability prevention, care and limitation services at grass root level. Therefore, data analysis for any given geographical area from PHC/SET to Taluka/Control Unit, District, State and National level can generate the reports in no time making monitoring of the entire programme easy. The Requirement Report makes strategy planning & resource allocation easier. The Report Register makes it easy to sort out all types of reports normally required by public health administrators. The Disability Analysis Report shows body part affected and its percentages among total cases as well as in the given population. The follow-up of patients, improvement or deficiency in disability prevention service coverage & quality of care can be analyzed quickly through Service Rendered Report and appropriate corrective actions can be taken. At a glance report provides for early recognition of reactions to prevent the disability and also offers cases with established disability for reconstructive surgery. DMP also has correction features for data entry and import export facilities making it user friendly. Our experiences with this new innovative DMP information system will be presented.

Comprehensive Leprosy Care Project & Medical Aid Association, F-701 Novartis India Compound, Off Aarey Colony Road, Goregaon (East), Mumbai - 400 063 Phone : 0091-22-8493179

Fax : 0091-22-8403287

Email : clcp@vsnl.com *

Di 199

SELF CARE KIT' - A NEW FIELD AREA APPROACH TO EMPOWERMENT OF PATIENTS IN DOMICILLIARY CARE

Atul Shah & Neela Shah Comprehensive Leprosy Care Project & Medical Aid Association, Mumbai

Deformities of feet in leprosy occur due to primary affection of nerves and /or due to anaesthesia. The changes in the lower extremity constitute the dry and/or ichthyotic skin following drug therapy, cracks in the feet and minor wounds to large ulcers. Neglect of injuries, inability to reach clinic for regular dressings,

poverty or inability to spend money on own care are other contributing factors which lead to chronicity and increased morbidity. The authors have devised and implemented a new approach to the care of feet with the Self-care Kit to empower patients with knowledge on domiciliary care for prevention of disability. Self-care Kit is a zippered bag containing antiseptic liquid, foot scraper, antibiotic ointment, a moisturizing cream, sterilized gauze, scissors, bandages and an adhesive tape. Step-wise empowerment training is given in the use of the self-care kit at Group Therapy session, which consists of use of the kit at home. Finally, patients are given the MCR footwear wherever indicated. Follow-ups show that after achieving cure or visualizing the good result by the use of the Self-care Kit, the patients feel more in control of their disabilities. At the field level, coming together of patients with different skin conditions and deformities at a group therapy session also act as motivating factor for practice of the self-care. Cost is low, especially when compared to the amount that a patient has to spend to reach the hospital daily for dressings. Presentation will show the results in various cases and an analysis of improvement in nearly 300 cases. In conclusion, the field area approach adopted for management of disabilities in feet with self-care kit is a simple and pragmatic solution for the vexatious problem of care of feet in leprosy. Its adoption at wider scale will benefit the leprosy program by truly empowering patients in self-care and prevention of disabilities.

Comprehensive Leprosy Care Project & Medical Aid Association, F-701 Novartis India Compound, Off Aarey Colony Road, Goregaon (East), Mumbai - 400 063 Phone : 0091-22-8493179

Fax : 0091-22-8403287

Email : clp@vsnl.com

Di 226

THE ICIDH-2 AND THE CONSEQUENCES OF NEUROTHErapy IN LEPROSY

Dr. Wim H. van Brakel, New Delhi

Purpose:

- 1) To identify the main long-term consequences of peripheral neuropathy in leprosy, using the conceptual framework of the International Classification of Functioning and Disability (ICIDH-2, WHO, 1999) and
- 2) To present a few highlights of recent and current developments in this area.

The issues:

1. When detected and treated in time with corticosteroids, the primary impairments may be reversible. However, a substantial proportion of patients (11-51%) does not recover or gets worse. In addition, depending on the country and the programme, 33-56% of newly

registered patients already have clinically detectable impairments, often no longer amenable to drug treatment.

2. Among new patients, 6-27% present with secondary impairments, such as wounds, contractures and shortening of digits, usually preventable consequences of the autonomic, sensory and/or motor neuropathy. All people with impairments need careful and repeated teaching on methods to prevent further impairment and subsequent disability (POID). As yet, little is known about the number of people requiring such interventions.

3. Following such impairments many people experience limitation of activities (of daily living), formerly called disability, which can be (partly) overcome with the help of assistive devices, training, surgery, etc.

4. As a result of such limitations, or because of visible impairments or simply because of the diagnosis leprosy, many people are restricted in their (social) participation, formerly called handicapped. Around one third of them need rehabilitation interventions, such as physical or occupational therapy, reconstructive surgery or (temporary) socio-economic assistance.

Continued on next page

5. There are no routine information systems in place that collect information on these issues. A few tools exist to measure severity or extent of impairment, but these have not been widely used and are not used to generate cohort-based statistics. There are no agreed indicators for monitoring POID activities or rehabilitation interventions.

Recent developments :

WHO-led work in the field of rehabilitation has led to the drafting of the ICIDH-2, providing a conceptual framework for rehabilitation and the whole area of consequences of health conditions. Although experience to date is very limited, the conceptual framework appears very appropriate for leprosy. Based on the ICIDH, a new tool for assessing activities of daily living - the Green Pastures Activity Scale - was developed. The design of a participation scale is under way. A proposal for pilot studies on the usefulness of the WHO Disability Assessment Schedule (WHODAS II) with people affected by leprosy has been submitted to WHO.

Conclusions :

For many people, the long-term consequences of leprosy are more important than the disease itself. While these have been described and studied for many decades, as yet no conceptual framework has been adopted internationally that allows a holistic approach in the area of POID and rehabilitation. The ICIDH-2 offers such a framework, while at the same time greatly facilitating communication between those working in the field of leprosy and others working in other areas of prevention and rehabilitation. It is proposed that the ICIDH-2 be widely adopted as a frame-

work for classification of long-term consequences, targeting of POID and rehabilitation interventions, information systems for monitoring and evaluation and research.

C/o.TLM India, CNI Bhavan, 16 pandit Pant Marg, New Delhi - 110 001 Phone : 0091-11-3716920

Fax : 0091-11-3710803

Email : wvbrakel@iname.com

Di 280

AN EXPERIENCE OF CONTROLLING LEPROSY DISABILITY

Zhang Lianhua, Jiangsu Provincial Institute Of Dermatology, Nanjing, China

So far, the human being cannot effectively stop the occurrence of leprosy and impairment caused by the disease, but they can effectively drop down the disability happening through comprehensive POD measures. The author introduced an experience gained from the POD pilot areas in Jiangsu Province. Supporting based on local government, especially on the economic and administrative, we need to establish two systems and better relationship of them to fight against leprosy disability. One system is doctor team which includes professional staff and the part-time job leprosy doctors who service in, especially in surgical department, nerve department and dermatology of general hospital. Another system is the team of people affected by leprosy including new and cured patients. The part-time job leprosy doctors should be given leprosy health education and have to pass the examination of the leprosy knowledge, their tasks are detection for the first symptom of leprosy in new patients and referring these suspected patients to professional doctors. The professional staff should be responsible for patients on diagnosing & MDT treatment in time, giving psychological consultancy, offering neuritis detection monthly & treating neuritis with Predisone, teaching patients in reaction & neuritis feature clues, educating them self-care knowledge and helping patients to find causes of damage. The patients should understand the reason why and how the disability often happens in leprosy, remove the self scare, actively cooperate with his/her professional doctor to report clues of impairment and the development of neuritis or reaction treatment, insist on checking the key spot where it is easy to be injured and doing self-care everyday. In addition, the cured patients who benefited from POD and experience summed up by themselves against the disease can be further trained to aid other patients.

Jiangsu Provincial Institute Of Dermatology, 42 Zhongyang Road, Nanjing - 210008, China

Phone : 0086-25-3356148

Fax : 0086-25-7716588

Di 294**THE INTERNATIONAL CLASSIFICATION OF FUNCTIONING AND DISABILITY IN LEPROSY : THE ICIDH-2***J. W. Brandsma* -Pokhara, Nepal

The International Classification of Functioning and Disability (ICIDH-2, 1999), formerly the International Classification of Impairments, Disabilities and Handicaps, offers a framework that can facilitate the rehabilitation of persons affected by leprosy.

The classification is published and its use promoted by the World Health Organization. Rehabilitation is a dynamic multidisciplinary process, which often combines interventions of medical, social, educational and vocational disciplines to maintain or obtain and secure for a person who is experiencing certain consequences of a health condition, a respected and satisfying place in society.

Important aims of the ICIDH-2 are: to provide a scientific basis to understand and study the consequences of health conditions and to establish a common language for describing consequences of health conditions.

The ICIDH-2 defines and classifies health related conditions in three dimensions: Function and Structure (body level); Activity limitations (personal level), and Participation restrictions (socio-economic level).

The common (in)visible impairments in leprosy (claw-hand, loss of sensation, loss of eyebrows, etc.) are listed in the classification of Structure and Function. When as a result of leprosy (neuropathy) a person has difficulty in washing or dressing him/herself, or is not able to write or cook, the person has activity limitations. There are restrictions in participation when the person is not allowed to visit public places, experiences rejection, cannot find a marriage partner, etc.

The environment determines to which extent persons may experience activity limitations and participation restrictions. These environmental factors are also classified in the ICIDH-2.

A leprosy affected person commonly experiences consequences of the disease at all three levels. To be able to fully rehabilitate a person and assess to what extent selected interventions are effective, appropriate assessment instruments are needed.

The purpose of this presentation is to emphasise the role the ICIDH-2 can play in the rehabilitation of leprosy affected persons. In case studies, the use of the ICIDH-2 will be illustrated.

P.O.Box 5, Pokhara, Nepal Phone : 00977-61-20342
Fax : 00977-61-20340 Email : wbrandsm@inf.org.np

Di 315**TREATMENT OF PLANTAR ULCER IN LEPROSY***D.Chakraborty & T.Chakraborty* Society For The Welfare Of The Handicapped Persons, Durgapur, W.Bengal

Chronic ulcer, planter ulcer in particular is the serious outcome of leprosy. The conventional treatment of planter ulcer includes proper foot care and bed rest which seem to be not satisfactory to keep the patient active. The chance of healing of planter ulcer is remote if adequate rest of feet is not given in addition to routine treatment. To explore the other means of treatment to save the leprosy patient from disability a clinical trial was undertaken for a period of six months to study the effect of some selected homoeopathic medicine on healing of planter ulcer.

Thirty leprosy cured patient with planter ulcer were randomly selected for the trial. Ten patient were selected who have completed MDT. Other ten patients received only homoeopathic treatment. Five patients were selected for control study in both cases. None of the patients were advised for bed rest. Assessment of efficacy of the treatment was based on the volume of ulcer calculated from maximum length, breadth and depth of the ulcer at the time of first appearance, at three months and at the end of the treatment. All the patients of both study groups showed remarkable improvement and complete healing of the ulcer.

Society For The Welfare Of The Handicapped Persons,
32 School Road, Durgapur - 713 204, W.Bengal

Phone : 0091-343-562156

Fax : 0091-343-583061

Di 355**THE DEVELOPMENT, IMPLEMENTATION AND FOLLOW-UP OF NATIONAL STANDARDIZED PREVENTION OF IMPAIRMENT/DISABILITY IN HANSEN'S DISEASE TRAINING COURSES FOR ALL 27 BRAZILIAN STATES***Linda F.Lehman, Hannelore Vieth, Maria Beatriz P.Orsini & Maria Leide W.Oliveira* Belo Horizonte, Minas Gerais, Brazil

The coordinator of CNDS of the Ministry of Health in Brazil requested a collaborative National Prevention of Impairment/Disability (POID) Project between the government and ALM in August of 1996, to start in 1997. This presentation will focus on the POID training courses currently being adopted in Brazil.

The essential components to be discussed are :

1. The recognition of the size of the HD problem in Brazil with 27 states and over 5,000 municipalities.

2. The recognition that POID is an essential component of Hansen's disease control programs (WHO).
3. The identification and selection of a project coordinator.
4. The identification and selection of a national POID advisory committee.
5. The identification of POID needs in training and supervision.
6. The consensus of a working definition for POID and essential POID activities and tasks.
7. The elaboration of two types of courses, one for training trainers/supervisors and the other for training local health care workers.
8. The elaboration of educational material and training methods.
9. The establishment of a strategy which would enable each state to have its own capacity to train and supervise POID activities with Hansen's disease control programs.
10. The development of evaluation criteria.
11. The identification of needed political and financial support required for a successful outcome.

R.Dom Prudencio Gomes, 675/202, Belo Horizonte, Minas Gerais - 30535-580, Brazil Phone : 0055-31-3758057

Fax : 0055-31-3758057

Di 356

BASIC ACTIVITIES AND SKILLS DETERMINED IMPORTANT IN PREVENTING IMPAIRMENT AND DISABILITY IN HANSEN'S DISEASE AND THEIR IMPACT ON TRAINING AND SUPERVISION IN BRAZIL IN 1997-2000

Linda F. Lehman, Hannelore Vieth, Maria Beatriz P. Orsini & Maria Leide W. Oliveira Belo Horizonte, Minas Gerais, Brazil

Brazil has 27 states and over 5,000 municipalities. It continues to have over 40,000 new cases of HD diagnosed yearly. The coordinator of CNDS of the Ministry of Health in Brazil requested - collaborative National Prevention of Impairment/Disability (POID) Project between the government and ALH in August of 1996. One outcome expected was to integrate essential POD activities into all HD control programs. Therefore it was necessary to identify essential activities and skills needed for preventing impairments and disability.

A consensus of basic activities and skills were developed by the National POID advisory committee combined with the results from four 1997 national supervisory training workshops. The combination represented disease control realities throughout Brazil.

Using these activities and skills, standardized training courses and systematic supervision were developed and implementation started in 1997. This presentation will also show the course content and objectives of two standardized training courses. One course developed for the trainer/supervisor and the other course for local health care workers. The skills learned in the courses are then followed up in systematic supervision activities. Supervision was felt to be the key component to maintaining and improving quality care as well as key to giving feedback for future training needs.

R.Dom Prudencio Gomes, 675/202, Belo Horizonte, Minas Gerais - 30535-580, Brazil Phone : 0055-31-3758057

Fax : 0055-31-3758057

Di 30

LEPROSY REHABILITATION

Dr.Arjin Cholapand, Dr.Ruth Wongtrangkaphan & Dr.Kitti Kittiamphon Phrapradaeng Hospital, Samuthprakarn, Thailand

Chronic ulcer of the lower extremities (foot ulcer) is one of the most common problems of the leprosy patients. Its pathogenesis is the peripheral neuropathy and forms the neuropathic foot. All of these patients meet the doctors with chronic foot ulcer problems which sometimes turn to malignancy. The treatment of these chronic ulcers varies from conservative treatment to surgical treatment. However, in the severe ulcer which healing cause the scar, sometimes is unstable or inadequate tissue coverage after tumor resection. In the past, doctors used to do B-K amputation. Recently, many surgeons used the microsurgery technique to solve the problems.

In this report, we treat 11 patients since 1993-2000, age 40-71 yrs. We have 2 heel lesions, 4 forefoot lesions and 5 heel-lateral foot lesions. Seven cases are benign ulcer and four cases are malignant. All cases were treated by microsurgical technique; the donor flaps chosen in the series were groin (3 cases), radial forearm (2 cases), medial plantar (2 cases), rectus abdominis (2 cases), parascapular (1 case), gracilis m. (1 case). Average operative time is 6 hours. After 6 mths - 5 yrs. follow up, all patients get good result. In the malignant cases, the post-op radiotherapy can be achieved without any complication. From the report, the lower extremities salvage in leprosy patients by microsurgical technique is an alternative line of treatment without severe complication.

Phrapradaeng Hospital, Communicable Diseases Control Department, Ministry of Public Health, Tambon Bangyapraek, Amphur Phrapradaeng, Samuthprakarn, Thailand - 10130

Phone : 001-662-3859135, 3859136, 3859137, 3859140

Fax : 001-662-3859138 Email : arjin ch@hotmail.com
or psnaweche@usa.net

Di 31

BACTERIOLOGICAL STUDY OF PUS ISOLATES FROM NEUROPATHIC PLANTAR ULCERS ASSOCIATED WITH ACUTE INFLAMMATORY PHASE

Gigi J Ebenezer, Sheela Daniel, Sujai Suneetha, Esther Reuben, Parthebarajan S & Samuel Solomon

Schieffelin Leprosy Research and Training Centre, Karigiri, Vellore District

Plantar ulceration of the foot is a common secondary complication in leprosy and is one of the major reason for morbidity and repeated hospital admissions in leprosy and diabetic care centres. Microbial flora of the infected wound is varied and show differing antimicrobial susceptibility patterns. This study compares organisms infecting leprosy plantar ulcers with those plantar ulcers of other etiologies and their drug susceptibility patterns.

This is a study of 86 patients with infected plantar ulcers who had pus culture and sensitivity. 55 patients had leprosy, 13 patients had leprosy and diabetes, 12 patients had diabetes and 6 patients developed plantar ulcers due to other causes. 64 were males (74.4%) and 22 females (25.6%). A total of 267 organisms were isolated from these patients ranging from single organism in 3 patients and 5 organisms in 8 patients. Multiple isolates were grown in most of the patients. The most commonly isolated organism was *Proteus* species (chiefly *Proteus mirabilis*) which was grown in 53.4% of the patients. This is a significant finding considering that other studies had found *Staphylococcus aureus* to be the most common organism isolated. *Enterococcus* was the second (47.6%) commonest organism. *Staphylococcus aureus* was the third (43%) commonest organism isolated. The other organisms isolated were *Pseudomonas aeruginosa* in 20.9%, *E coli* in 18.6%, non-fermenting gram negative bacilli in 15.1%, *enterobacter* and *citrobacter* species in 10.4%. These isolates highlight the fact that plantar ulcers are prone to faecal contamination. *Clostridium tetani* was not isolated from any of the patients.

In general, the profile of organisms grown from diabetic ulcers was quite similar to that in leprosy patients.

Sensitivity of the organisms to various antibiotics will be presented and discussed.

Schieffelin Leprosy Research and Training Centre, Karigiri - 632 106, Vellore District, Tamil Nadu

Phone : 0091-416-274229

Fax : 0091-416-274274

Di 82

A PRELIMINARY REPORT ON THE USE OF LASER IN THE TREATMENT OF PLANTAR ULCERS IN LEPROSY

Joshua J, John A.S., Mahato N & Bansriar S The Leprosy Mission, Calcutta

A case control study is underway at the Premananda Memorial Leprosy Hospital to assess the usefulness of LASER therapy in the management of plantar ulcers in leprosy. The aim is to see if there is a significant increase in the rate of healing, if LASER is incorporated as a modality of treatment. Low intensity LASER has been a popular modality of treatment of open wounds despite the fact that there is wide disagreement regarding its usefulness and the method of its application.

In our study 25 patients with simple plantar ulcers are to be used as cases and another 25 as controls. We have standardised a protocol for the treatment of simple plantar ulcers. Only patients with simple plantar ulcers are chosen for the study. All ulcers are measured to note their area, and the foot is immobilised in a below knee plaster cast with a window for the ulcer to facilitate alternate day dressings. The patients in the control group are treated thus and those in the group to receive LASER therapy, have their ulcers subjected to radiation by a HeNe LASER beam of 685nm, at an energy level of 4J/sq cm of ulcer area, for a period of 20 minutes each sitting, three days week. The selection of cases and the method and materials used and the results are presented. The rate of healing of similar sized ulcers among the controls and the cases under LASER therapy are compared and presented as a preliminary report.

The Leprosy Mission, Premananda Memorial Leprosy Hospital, 259/A, Acharya Prafulla Chandra Road, Maniktala, Calcutta - 700 006 Phone : 0091-33-3509500, 3527170

Fax : 0091-33-3506072

Email : tlmcal@cal12.vsnl.net.in

Di 134

REVIEW OF RESULTS OF EXCISION ARTHROPLASTY FOR SEPTIC ARTHRITIS OF METATARSOPHALANGEAL JOINTS AS A COMPLICATION OF PLANTAR ULCERATION IN LEPROSY

Anil Thomas Oommen, Parthebarajan S, Mannam Ebenezer & Samuel Solomon Schieffelin Leprosy Research And Training Centre, Karigiri, Vellore District

30 patients who had septic arthritis of the metatarsophalangeal joints as a complication of plantar ulceration in leprosy who underwent excision arthroplasty and primary closure of the plantar ulcer were reviewed. 22 of these patients were male. The common-

est site of MTP joint involvement was the 1st MTP joint. The average size of the ulcer was 2 cms. and the shape of the ulcer was usually oval. Diagnosis was made on the basis of signs of infection over the MTP joint, discharge from the ulcer and examination with a probe. Infection in the joint ranged from simple synovial discharge to seropurulent or purulent discharge.

Treatment was done with excision arthroplasty of the MTP joint, excision of the ulcer with primary closure of the plantar incision and dorsal or lateral drainage. In 2 patients, the plantar wound could not be closed as the wound was too large. The healing of the plantar incision took place in 2 weeks in 12 patients and 3 weeks in 14 patients. In 4 patients, healing did not occur by primary intention. In a follow up of 1-2 years, there was no recurrence in 24 patients and 4 patients had recurrent simple ulceration. 2 patients were lost to follow up.

Review of the results of this procedure dealing with septic arthritis of MTP joints secondary to plantar ulceration shows that primary healing of plantar incision could be achieved in three weeks time. As regards to recurrence, even though only 4 out of 28 ulcers treated by this procedure recurred, other contributing factors will have to be considered in a prospective control study to support the view that this procedure has contributed to non-recurrence.

Schieffelin Leprosy Research And Training Centre, Karigiri - 632 106, Vellore District, Tamil Nadu

Phone : 0091-416-274229

Fax : 0091-416-274274

Di 160

FOOTWEAR FOR LEPROSY AFFECTED PERSONS WITH GRADE-I DEFORMITY - THE PROCESS AND OUTCOME IN MAKING NEW MODELS

Justine Bolton, Palande D.D., D.Rajesh, Narasimha Rao & Premanidi Limma Secunderabad

Proper foot care in leprosy is very important. Many people develop ulcers because of the improper care of the anesthetic feet. There are many problems with usage of footwear among leprosy patients. Many times, the footwear is not being worn due to various reasons and at times footwear models are unsuited to the foot condition.

A scientific attempt is being made to correct the problems associated with the footwear for patients with Grade - I disability. After understanding the problems with the existing footwear models, new models are designed by scientists in shoe development. These footwear are field tested among the potential users. With the recommendations from the field-testing, the models are again modified.

The problem with the existing footwear, the procedure in designing the models, the field-testing procedure, its recommendations and the latest models are discussed in this presentation. Other agencies working in leprosy control also could do similar studies to design footwear, which promote usage among the community. In any POD programme, ensuring proper footwear usage is the key to foot care.

P.B. No.1518, Krishnapuri Colony, West Marredpally, Secunderabad - 500 026 Phone : 0091-40-7802139, 7807314

Fax : 0091-40-7801391

Email : vrp@lepraIndia.org

Di 177

DESIGNING AN INTERVENTION MODUIE FOR PREVENTION OF PLANTAR ULCERS IN THE POST ELIMINATION PHASE

Dr.J.Raghavendra Rao, R.D.Gaikwad, R.J.Lokhabde, Dr.(Mrs.)S.Edward & Dr.V.K.Edward

Richardson Leprosy Hospital, Miraj, Maharashtra

Planter ulcers in anaesthetic feet by far account for the largest number of patients getting disabled due to leprosy with added socio-economic disadvantages. They account for the largest number of admission in leprosy hospitals and gobble up a large chunk of the available resources - staff time, material and money.

In several places where elimination of leprosy is already achieved or is in sight of being achieved, programmes are being designed to adapt to a state of integration of leprosy services into the primary health care system. POD is one of the acknowledged main thrust components of these programmes. While designing a package for implementation of POD activities including training, it is essential to understand the factors that contribute to prevention / occurrence of ulcers in anaesthetic feet.

31 patients attending the OPD of Richardson Leprosy Hospital, Miraj between 1996-99 had sole sensory loss. 41 patients with sole sensory loss (without ulcers) were admitted into the wards during the same period. Apart from these 50 randomly selected age and sex matched patients who reported with plantar ulcers during the same period makeup the groups under study. These three categories of patients will be analyzed for the association between type of leprosy degree of anesthesia, occupation, steroid therapy, protective footwear, hospitalization and health seeking behavior and the occurrence of plantar ulcers.

Based on the resulting analyses intervention modules for POD, and training will be designed and presented for discussion.

Richardson Leprosy Hospital, Miraj - 416 410, Sangli District, Maharashtra Phone : 0091-233-211213

Fax : 0091-233-211708

Email : sblabtllm@pn2.vsnl.net.in or tlmiraj@yahoo.com

Di 214

USEFULNESS OF THE PATELLAR-TENDON-BEARING ORTHOSIS IN PREVENTION OF RECURRENCE OF PLANTAR ULCERS IN SMALL-SIZED FEET OF LEPROSY PATIENTS

Samuel Solomon & Parthebarajan S Schieffelin
Leprosy Research And Training Centre, Karigiri, Vellore District, Tamil Nadu

The PATELLAR-TENDON-BEARING (PTB) ORTHOSIS or PTB is a device that is intended to transfer body weight onto the patellar tendon, thereby particularly relieving the sole of the foot from weight-bearing function, and is to be prescribed to patients with reduced plantar surface area. 133 PTBs had been issued for patients between 1991 and 1997. These records were reviewed. The distribution of ulcers was as follows : Fore foot=40, Mid foot=14, Hind foot=38, Lateral Border=27. Pre-existing deformities at the time of issue of PTBs were distributed as follows : Inversion=8; Rocker-bottom=23; Ankle instability=3; Short foot=35; Others=17. The condition of the contralateral foot and the footwear being used on that foot showed a distribution as follows : Flat foot=9; Short foot=6; Below-knee amputation=3; Bilateral PTB=3; Minor abnormality=18; Relatively normal=94. The results of utilisation of PTBs in reduction of recurrence of ulcers was monitored by computation of the ulcer rate for two years immediately before and after the issue of the PTB. It was found that 44/133 (33%) of patients had improved. A similar number (43/133) did not deteriorate in the ulcer rate after using PTB. Further detailed review of these results will be presented.

Schieffelin Leprosy Research And Training Centre, Karigiri - 632 106, Vellore District, Tamil Nadu

Phone : 0091-416-274229

Fax : 0091-416-274274

Di 262

EFFICACY OF SELF-CARE FOR PLANTAR ULCER IN 43 CASES OF LEPROSY

Wang Biao Dermatitis Control Hospital of Jianhu County, Jiangsu, China

Objective : To evaluate the effect of self-care for plantar ulcer.

Methods : According to Zhang's guideline in nursing anesthetic feet by patients themselves. We trained patients in self-care knowledge, monitored them regularly and offered them necessary equipments.

Results : Ulcers reduced from 43 cases (50 spots) before nursing to 15 cases (18 spots) and with a cure rate of 65.12% (64.00%).

Conclusions : The way of self-care is more efficient for them. The author suggests them reducing the intensity and modifying the manner in work and keeping nursing in their whole lives.

Dermatitis Control Hospital of Jianhu County, Jiangsu - 224700, China Phone : 0086-515-6213209

Di 310

FOOT CAMPS: EXTENDING DISABILITY CARE TO THE PERIPHERY

Mark Macdonald, Jaganath Mahajan & Sharan P.Ruchal

Anandaban Leprosy Hospital, Kathmandu, Nepal

Community based skin camps have traditionally been performed, by visiting specialists, as a means of detecting new cases of leprosy and its complications, and assisting in ongoing management and care.

Except in high prevalence areas, these result in detecting few new cases.

A new initiative with a broader range of objectives, concentrating on lower limb problems in leprosy, was tested. The objectives included a) Provision of disability care : treating simple ulcers, providing footwear, referral for re-constructive surgery and education in self care of neuropathic impaired foot. b) Detection of new cases c) Evaluating level of health knowledge and instigating a problem solving approach.

Seven community based foot camps over a nine-day period were conducted by a multidisciplinary team from a tertiary referral hospital, in Nepal. Camps were conducted at government health posts in both hill and plain areas. A total of 452 people were seen including 206 (46%) leprosy affected people and suspects. Twenty new cases (4%), were found including two diagnosed by positive biopsy. Six defaulters (1%) were recommended on MDT. Of those affected by leprosy two-thirds received footwear or orthoses and 24 (12%) were referred for re-constructive surgery. In addition, an assessment of the level of health knowledge, with regard to self care of leprosy affected feet, was made in 42 patients and advice was given using a participatory problem solving approach. The outcome of this successful new initiative was detection of many new cases as well as provision of disability care at periphery. This model could be used in other areas with high prevalence rate and high disability proportion.

Anandaban Leprosy Hospital, P.O. Box 151, Kathmandu, Nepal Phone : 00977-1-290545

Fax : 00977-1-290538

Email : anandaban@mail.com.np

Di 18**REOPERATION IN FAILED CORRECTION OF FOOT-DROP**

A.Beine & S.Ananth Reddy Sivananda Rehabilitation Home, Hyderabad

Short Introduction

Post-operative failures and corrective surgical procedures / reoperations dealt with

Failures

- 1) Slackening of the transfer correcting foot-drop
 - a) lateral transfer tendon slip
 - b) medial transfer tendon slip
 -) medial and lateral transfer tendon slip

Corrective Procedure

Retightening at relevant suture level.

- 2) Slackening of transfer and retraction of (a short) tendon transfer not allowing retightening, but muscle of transfer acting.

Corrective Procedure

Muscle of the transfer made functional using Tibialis Anterior Tendon as graft to repair the distal defect of the transfer correcting the failure of foot-drop correction (Innovation).

Transparencies are used to show the procedures, which correct the failures of earlier attempted foot-drop correction.

Sivananda Rehabilitation Home, Kukatpally, Hyderabad - 500 072 Phone : 0091-40-3057679, 3057904

Di 63**PREVENTION OF HAND DEFORMITY - 'A CHALLENGE IN LEPROSY CASES'**

Dr.Sajid Hussain, Central JALMA Institute For Leprosy, Agra

Peripheral nerve involvement is commonly seen in leprosy. This causes the sensory and motor loss in limbs. End result is clawing of hand. It has been observed that the decompression of these nerves at an early stage of occurrence of signs & symptom can help to prevent the deformity.

Keeping this view in mind, in last ten years, the cases of ulnar & median nerves referred to us which showed neural symptoms were undertaken for nerve decompression. The sensory & motor status was recorded preoperatively as well as post operatively and every four weeks. The Electro Physiological studies were also undertaken, pre and post operatively.

In this paper, we will discuss the follow up results of

ulnar & median nerve decompression and also the merits and demerits of these procedures.

Central JALMA Institute For Leprosy, Tajganj, Agra - 282 001 Phone : 0091-562-331751 - extension 54

Fax : 0091-562-331755

Email : useng@nde.vsnl.net.in

Di 131**CAN DEFORMITY CORRECTION BE DONE AT MANY MORE LEPROSY CENTRES?**

T.S.Narayanakumar & T.Kirubakaran Samuel Raj Kumbakonam

Reconstructive surgeries for correction of deformities in the leprosy affected were done only at well organised surgical units in few leprosy centres. As all those who had deformities could not avail the benefits of surgery due to their inability to stay longer at far off centres, it was proposed to conduct surgeries at selected leprosy centres where facilities were available or could be made available. Two such centres, namely CULES Hospital, Coimbatore and Kasturiba Kushta Nivarana Nilayam, Mazhavanthangal in Tamilnadu, supported by GLRA-ALES, were identified to organise reconstructive surgeries, on trial basis.

Field staff and physiotherapists were given orientation to identify, select and prepare patients for surgical correction, under the guidance of medical officers. The available infrastructure were utilised with modifications and supplementations wherever necessary. Surgeon and theatre staff from a referral hospital visited the centres with required instruments and carried out surgeries for as many as 14 patients, most of whom would not have had surgeries elsewhere. Encouraged by this experience, we have planned to organise surgery programmes at some more centres, supported by GLRA-ALES.

As large number of persons are in need of surgical corrections and since number of centres with facilities to operate are far less, there is a need to promote performing surgeries at many more centres, by improving available infrastructure and mobilising support from other centres, without compromising the basic requirements for reconstructive surgery. In this paper, we share our experience and discuss the advantages and methods of promoting surgery programmes at different centres.

New No.25, Gandhi Nagar, Kumbakonam - 612 001, Tamil Nadu Phone : 0091-435-410139

Di 140**A COMPARATIVE STUDY BETWEEN CLAW HAND FOLLOWING RE-CONSTRUCTIVE SURGERY AND NORMAL HAND**

Victor Joseph Paul The Leprosy Mission Hospital, Naini, Allahabad

Objective : To study the functional and cosmetic outcome of claw hand following Zancolli Lasso surgery and compare the outcome with the normal hand.

Design : 50 subjects (control) with normal hands and 200 subjects (study group) who had had Zancolli Lasso surgery from 1998 to 2000 January were randomly selected. Controls were assessed for hand functions and range of movement of small joints of the hand. For the study group, from retrospective data available, data on hand functions and range of movements of small joints of the hand up to 3rd week post-operative and first follow-up (3 months after discharge) was taken for the study.

Setting : The Leprosy Mission Hospital - a large referral centre at Naini, Allahabad, Uttar Pradesh, India

Participants : Controls from relatives of patients/non-leprosy patients with normal hands and study group from leprosy in-patients at The Leprosy Mission Hospital, Naini.

Results : Will be discussed in the presentation.

Occupational Therapist, The Leprosy Mission Hospital, Naini, Allahabad - 211 008, Uttar Pradesh

Phone : 0091-532-697267

Fax : 0091-532-697262

Email : tlmnaini@nde.vsnl.net.in

Di 313

POLLICIZATION OF THE INDEX FINGER IN A SEVERELY DEFORMED LEPROSY HAND

Prashant Murugkar & Friedbert B.Herm Green Pastures Hospital, Pokhara, Nepal

The 41 year old male patient Jit B.R. was admitted to Green Pastures Hospital with BT type leprosy, disability grade 2 for both eyes, hands and feet, a corneal ulcer and peripheral ulcers. Except for the middle finger all fingers of the left hand were shortened to the length of the proximal phalanx and the thumb was shortened about 50% of its original length. Metacarpophalangeal joint disintegration of the index was seen in the x-ray of the left hand. Grip and pinch function of the left hand were completely insufficient for ADL activities.

Operation was planned after MDT treatment was completed and all ulcers had healed. Under axillary block anaesthesia the shortened left index finger was islanded with its artery and vein. It was then moved into position and fixed to the proximal phalanx of the thumb using an axial K-wire. Loose tagging sutures were done to close the incisions and a posterior splint for immobilization was given. After one week the islanded pedicle flap was still well circulated and a thumb spica splint was applied in order to increase the

first web space. Skin grafting of the web space was done after 3 weeks and an opponensplasty using one of the intact FDS tendons is planned to further restore the grip and pinch function.

In summary this case study reveals the importance of tertiary referral facilities where plastic and reconstructive surgery can be performed for severe leprosy grade 2 disability. The index of Jit

B.R. s left hand would have been just amputated in a district hospital.

Green Pastures Hospital, RELEASE, P.O.Box 28, Pokhara - 33701, Nepal Phone : 00977-61-20342, 23099, 28162

Fax : 00977-61-20430

Email : gph@inf.org.np or mcoms@mos.com.np

Di 318

THE ACCEPTABILITY OF PROSTHETIC REHABILITATION AMONG LEPROSY PATIENTS

Sharan Prasad Ruchal, Narendra Khadka, Sanju Ruchal & Mark Macdonald Anandaban Leprosy Hospital, Kathmandu, Nepal

More than 100 leprosy and non-leprosy patients had below knee amputations (BKA) at Anandaban Leprosy hospital, Nepal, over the past 18 years. These patients were fitted with prosthesis. All disabled people with prosthetic limbs face difficulties in their daily lives. We are concerned that people affected by leprosy may have additional difficulties with an artificial limb, on account of other complications of their disease and associated stigma.

This study prospectively interviewed 40 people (in both groups), with previous BKA, to review problems of daily living, acceptability of prosthesis, and difficulties with ongoing maintenance. We also sought to determine how acceptable the prostheses are to the patient s family and society, in order to see if leprosy patients suffer more social stigma than non-leprosy patients with the same disabilities.

Anandaban Leprosy Hospital, P.O. Box 151, Kathmandu, Nepal Phone : 00977-1-290545

Fax : 00977-1-290538

Email : anandaban@mail.com.np

Di 319

ASSESSMENT AND RESULTS OF OPPONENS REPLACEMENT SURGERY

Richard Schwarz, Green Pastures Hospital, Pokhara, Nepal

Anandaban hospital as one of the 2 tertiary leprosy referral centres of Nepal offers a broad spectrum of reconstructive surgery services. The author has been working as a consultant reconstructive surgeon in both referral centres. The following study was conducted in Anandaban Hospital.

All patients undergoing opponens replacement surgery between Jan/1987 and Dec/1997 were reviewed. Adequate records were found on 156 operations on 134 hands on 115 patients. Average age was 30. FDS reconstruction was done in 93% of primary reconstructions, and was combined with intrinsic replacement in 38%. Overall pinch grip (to which finger the thumb could be opposed, where index finger = 1 and little = 4) improved from an average of 1.1 to 2.8. Opponens gap (gap between base of first and fifth metacarpals on full opposition) decreased from 52.5 mm average to 38.4 mm. Patient satisfaction was graded as good in 74% and fair in 19%. Of note is that 55% could not achieve any pinch grip pre-op which was reduced to 11% post-op. Older patients had similar results as younger. The addition of intrinsic replacement procedures did not adversely affect the outcome. There were 23 complications. Those undergoing opponens revision procedures reported good patient satisfaction in 57%.

In summary, opponens replacement surgery is a highly successful procedure which can be combined with intrinsic replacement with ease. Secondary reconstruction is less successful but gives satisfactory results in about half the cases. Grading patient satisfaction is an important part of the assessment as this is a very real sense in the ultimate measure of success.

Green Pastures Hospital, RELEASE, P.O.Box 28, Pokhara - 33701, Nepal Phone : 00977-61-20342, 23099, 28162

Fax : 00977-61-20430

Email : gph@inf.org.np or rschwarz@inf.org.np

Di 320

SURGERY FOR TRIPLE NERVE PALSY

Richard Schwarz, Green Pastures Hospital, Pokhara, Nepal

Green Pastures Hospital and Anandaban Hospital both serve as tertiary leprosy referral centres in Nepal offering reconstructive surgery services. The author has been working as a consultant surgeon in both institutions. The following study was conducted in both hospitals.

A retrospective review was carried out on all patients undergoing surgery for triple nerve palsy from 1977 to 1999 inclusive. Twenty-one charts were available. All 21 patients underwent wrist extension procedures with successful (excellent or good) results in 78%. Sixteen underwent EDC reconstruction with 85% success, and

90% of 13 patients undergoing thumb extension procedures had excellent or good results. 63% of those undergoing intrinsic replacement were successful, and 63% of those undergoing thumb opposition procedures were successful. Nine patients developed complications.

It is believed that triple nerve palsy is a severe disability, and multiple operations with a high overall complication rate are necessary. However, results with appropriate surgery are rewarding. Expert physiotherapy seems to be absolutely necessary.

Green Pastures Hospital, RELEASE, P.O.Box 28, Pokhara - 33701, Nepal Phone : 00977-61-20342, 23099, 28162

Fax : 00977-61-20430

Email : gph@inf.org.np or rschwarz@inf.org.np

Di 391

RECONSTRUCTIVE SURGERY AT PERIPHERAL CENTRES

Dr.D.Vijaya Kumar The Leprosy Mission Hospital, Delhi

Though the prevalence and duration of treatment for leprosy has decreased in the last few decades, there remains a larger number of patients with a legacy of deformities due to leprosy, which are a very serious socio-economic problem. A large proportion of these patients would benefit from reconstructive surgery, but have no access to the few highly specialized referral centers where it is available. So Freedom from Deformity remains only a distant dream for many patients disabled by leprosy.

With these patients in mind, The Leprosy Mission has evolved a strategy of visiting reconstructive surgeons performing operations at peripheral / rural hospitals with basic surgical facilities, so as to reach a larger number of patients over a wider area. This effort has been successful and over the last few years many patients who would otherwise have struggled with their deformities throughout their lives have been able to avail of the benefits of reconstructive surgery.

The experiences presented here are derived over a period of 5 years from 1995 to 1999 during which 730 operations were performed by the author in different centers in Andhra Pradesh, Tamil Nadu, Maharashtra, and West Bengal.

The author presents his views on how reconstructive surgery can be provided to patients in remote, rural areas with judicious use of modified techniques, limited technical facilities and staff available at peripheral hospitals.

The Leprosy Mission Hospital, Nandnagri, Shahdara, Delhi - 110 093 Phone : 0091-11-2281451

Fax : 0091-11-2275132

Di 415**PREVENTION OF DEFORMITIES AMONG NEWLY DETECTED CASES WITH THE HELP OF NERVE FUNCTION ASSESSMENT IN AN URBAN LEPROSY PROJECT**

S.L.Narasimha Rao, Ranganadha Rao P.V., Pratap Reddy, Mohammed Shamsuddin, Sukumar Samson & Swamy Reddy G Secunderabad

MDT programme was started in Hyderabad city with SET strategy by LEPRO India. Covering a population of 1.5 million people in the city, 2565 cases were detected in the project from 1995 to 1999. A prevention of deformities programmes was added as an integral component of MDT work in this project. This includes systematic examination of nerve function with the help of sensory examination voluntary muscle testing (VMT) and palpation of nerves. The sensory examination was done with Semmes Winsten mono filaments. VMT was graded using MRC grading. Palpation to detect tenderness of nerve was also included in the nerve function assessment procedure.

199 patients were found to be having neuritis with nerve function deficit. Only 11.5% of the patients have shown signs of reversal reaction in the skin and nerve impairment. In these cases redness of the skin lesions has indicated the reaction in the nerve. 51% of these patients had no skin signs and nerve tenderness, but presented nerve function deficit. Relative incidence of silent neuritis and recovery of nerve function among these groups of patients with standardized steroid therapy and physiotherapy assistance are discussed in the presentation.

P.B.No.1518, Krishnapuri Colony, West Marredpally, Secunderabad - 500 026 Phone : 0091-40-7802139, 7807314

Fax : 0091-40-7801391

Email : ranganadh@lepraIndia.org

Re 40**REHABILITATION OF LEPROSY SUFFERERS LIVING IN LEPROSY COLONIES**

Deepak Devalapurkar, Suresh Shipurkar & Balkrishna Jagtap Shendapark Leprosy Hospital, Kolhapur

INTRODUCTION

Every deformed or disabled leprosy sufferer lives a debilitated life. But the problems of disabled leprosy sufferers living in their houses or in organised leprosy institutes are comparatively easier than those of living on pavements or in leprosy colonies with earning their living either by begging or by illicit or illegal means. In view of this we have been trying to solve the problems of leprosy sufferers living in leprosy colonies as follows .

ACTIVITIES

A) On state level : Majority of leprosy colonies in Maharashtra were visited several times and the representatives were encouraged to come together and form a federation for solving their problems.

B) On local level : Welfare and rehabilitation activities undertaken for self settled inhabitants at Kolhapur (Maharashtra) by us were : 1. Movements and follow-up activities for obtaining civic amenities, such as electricity, water, latrines and building of roads.

2. Interest free loan for building materials for 40 families. 3. Plantation of trees on every plot individually owned and about 350 trees on common land. 4. Encouraging use of smokeless chulhas. 5. Giving legal help / acting as arbiter for restoring legal rights to family properties. 4 persons were actually benefitted out of 12 helped. 6. Financial help / low interest loans for buying milk yielding animals, sewing machines, etc. and starting trade and business was given to 17 persons. 7. Getting employment, 3 got jobs out of 6 tried for.

8. Employment as farm labourers for 16 persons. 9. Medical help and counselling for all.

10. Providing educational material for school going children.

CONCLUSION

1. We were able to succeed in preventing 39 leprosy patients and 23 healthy contacts from begging on roadside. Still there are 89 leprosy patients who go on begging for their

Continued on next page living.

2. Begging being easy and lucrative profession, it becomes very difficult to turn the leprosy sufferers away from this vocation. Disability becomes the mean of earning.

3. It is difficult to enforce even a semblance of discipline and even one eccentric inhabitant can disrupt the whole programme.

4. It became easier to help the inhabitants help themselves through the agency of state level organisation.

5. Though the problems of leprosy sufferers are varied, complex and complicated, a concerted effort, individually and organisationally would help to alleviate their hardships.

Shendapark Leprosy Hospital, Kolhapur - 416 012, Maharashtra Phone : 0091-231-693252

Fax : 0091-231-524246