Leprosy is a disease which has tormented the human beings for many centuries. It is ironic that the disease with its centuries long association with mankind is so little understood and indeed misunderstood in all its aspects such as its etiology, causation, means of transmission and curability. The principal reason is fear for it is a disabling and disfiguring disease, which has no cure until comparatively recent times\(^1\).

There are number of things that leprosy is not. It is not hereditary, it has nothing to do with impure blood, it is not a poverty related disease. It does not call for isolation as all leprosy patients are not infectious. Infection is probably not spread by food and water and it is indeed not a highly infectious disease. It is neither a difficult disease to diagnose nor treatment per se is difficult, although regular and prolonged care is necessary. It does not require to be treated in a specialized institution either\(^2\). All persons are not susceptible to the disease, although insanitary conditions, malnutrition and lack of personal hygiene may “invite” the leprosy bacillus, as such conditions might do for a host of other diseases and infections. It is not a fatal disease either as the mortality is very low unlike several other diseases such as plague, cholera, chickenpox etc, but the leprosy disease causes its victims much physical, psychological and social damage on account of deformities it causes to human beings\(^3\).

It is the deformities of the leprosy affected that have traditionally caused repugnance, and in the absence of any understanding about cause and cure, the leprosy

\(^{2}\) Navin Chawla, Vocational Rehabilitation and Social Reintegration of the Leprosy Affected in India, New Delhi (N.D) pp. 13 – 14.
\(^{3}\) Hastings, Roberts, Ibid, p. 53.
affected were viewed, in a number of societies, as objects of divine punishment and leprosy as a visitation of past sins. Contagion was the great dread and as traditional medicine offered no cure for leprosy, society’s attitude remained, over the centuries, one of outcasting of the leprosy affected. The disease until a couple of decades and even today in certain countries considered to be the most dreaded of all diseases with the possible and recent exception of AIDS\(^4\). The deformities that change the identity of a patient is the principle cause of Social stigma and in many spheres of life the process of outcasting still continuing to the leprosy effected.

VI(a). STIGMA AND ITS MEANING

“Stigma” could be a sign of insult or disgrace or shame. A stigma is undesirable, reprehensible or objectionable. With regard to leprosy, stigma considers not only the characteristic visible physical sign of paralysis, ulceration and deformits associated with advanced peripheral neuropathy, but also, by attention to the whole guonut of irrational fear and prejudice under which leprosy victims suffer”\(^5\).

By stigma we mean that thought or act of making or characteristic that disqualifies some one from social acceptance “………..originally the term Stigma referred to bodily signs designed to expose something unusual and bad about a person’s moral status”. It referred to a blemished person to be avoided, especially in

\(^4\) Navin Chawla, op.cit., p. 24.

public areas. The important aspect of stigma is that people tend to view some one with stigma as not quite human⁶.

Leprosy still has a special position among diseases. There is regrettably, a deeply entrenched prejudice against patients with leprosy. The idea of leprosy means immediately stigma attached to it as it brings deformity; it is contagious; it is hereditary; it is not curable. The fear and prejudice attached to it are more difficult to treat than the disease. The stigma makes the patient to suffer life long without hope. The stigma creates a false picture about the disease and its patients⁷.

**Attitude of Medical Staff**

It is sad to note that even physicians and other medical staff became victims of social stigma and treat leprosy patients with prejudice and fear. Many doctors continue to display a lack of “Clinical confidence” and “body of knowledge” about the disease. Hence, several medical practitioners and doctors are unwilling to handle leprosy patients sometimes for fear that this many not be tolerated by the bulk of their clientele. This is too stigma and has the effect of strengthening societies misapprehensions, instead of reverse. With stigma being so deeply ingrained, a view has been taken by some medical practitioners that it is self-defeating to maintain special leprosy clinics and hospitals and advocate even the use of the world

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⁷ Removing Stigma of Leprosy: *Articles in Times of India, Bombay*, Friday, June 19th 1979, p. 6.
“leprologist” either\textsuperscript{8}. Hence, some of the medical staff are not willing to work in leprosy hospitals. One such incident is as follows –

A staff nurse was disgusted to read the office order that she is posted to leprosy ward. Immediately she became restless and treated the order as a punishment given to her by the higher authorities\textsuperscript{9}.

\textbf{Gandhiji’s attitude to stigma}

Gandhiji tried to remove the social stigma attached to leprosy in many ways in his life. He fearlessly handled the patients, dressed their wounds and educated the public about leprosy. Even Pandit Nehru warned Gandhiji and asked him “What will you do if you develop leprosy?” Gandhiji replied “I will jump with Joy”. Gandhiji was aware that leprosy was a mild communicable disease. If it is diagnosed early and treated regularly, it won’t create health hazards and he was convinced that leprosy is curable\textsuperscript{10}.

According to Gandhiji “an unclean thought, distressed mind, moral and psychological disorders are more dangerous and worst enemies of man, but not the leprosy patient”\textsuperscript{11}.

\textsuperscript{8} Navin Chawla, \textit{Vocational Rehabilitation and Social Reintegration of the Leprosy Affected in India}, New Delhi, (N.D.), P. 26.
\textsuperscript{10} Ibid, P. 86.
\textsuperscript{11} Ibid, p. 53.
Leprosy and British Rule in India

Leprosy has received scant attention in Colonial India, and as the government has focused its attention on imperial and colonial polities, and on state intervention\textsuperscript{12}. The formation of policy on question of health in colonial India was rarely a matter of medicine alone. The highest priority given by British Government in colonial India was the health of the army, the European population and the protection and pursuit of mercantile interests\textsuperscript{13}.

The health of indigenous people was given least priority, except when vital interests were threatened\textsuperscript{14}. As leprosy was not deemed a threat to the Government. Hence the Britishers only focused their attention in the second half of the nineteenth century, largely due to its greater visibility internationally. This coincided with an overall concern in the status of public health in India following the take-over the administrative authority by British crown from the East India Company in the wake of Sepoy’s mutiny in 1856.

During the first Census that was conducted in India in 1871, it was estimated that there were 99,073 persons suffering from leprosy in British India\textsuperscript{15}. This information revealed for the first time the extent of leprosy in India.

\begin{footnotes}
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During this period, missionary interest in leprosy developed and the general public was targeted for subscriptions, which contributed to sustaining public concern. In 1874 Wellesley Bailey founded the Mission to lepers at Ambala in Punjab, India\textsuperscript{16} which in course of time become the major international organization concerned with leprosy. The Christian Missionary publications on leprosy drew on Biblical representations, and Wellesley Bailey’s comment is typical of this discourse: “The utter helplessness and dependence of these folks on others is a continual picture of the way sinners have to come to God and get His blessing”\textsuperscript{17}. For those who believed in the New Testament, the stories of Christ miraculously curing the lepers become metaphors for divine salvation\textsuperscript{18} and the missionary activity imprinted the specifically Christian representation of leprosy in the public mind.

Shortly after father Damien’s\textsuperscript{19} death in Moloka of Hawaii island in USA, a National Leprosy Fund was instituted whose activities included the appointment of a leprosy commission for India. The leprosy commission’s report represented the most exhaustive investigation of the century on the aspects of leprosy in India and also after taking into consideration the findings of Hansens\textsuperscript{20} discoveries that leprosy is caused by rod shaped Micro-Bacterium laprae (M. Laprae) and came to a conclusion that leprosy is not hereditary, but a contagious disease. During this period global fears and other non-scientific factors continued to haunt medical opinion, and the First

\textsuperscript{16} The Leprosy Mission International Celebrating 125 years, Souvenir, 1874-1999, Ramachandra puram, 1999, p. 28.
\textsuperscript{17} Wellesley C Bailey, \textbf{The Lepers of our Indian Empire}, London, John F Shaw, 1892, p. 80.
\textsuperscript{18} Gussow op.cit., note 1, p. 3.
\textsuperscript{19} Trautman, J.R. \textbf{A Brief History of Hansens disease}, \textbf{The Star}, 50(3), 1990, P.P. 3-16.
\textsuperscript{20} Ibid.
International Leprosy Congress at Berlin in 1897 concluded that “every leper is a danger to his surroundings” and recommended “segregation” as it is “virtually incurable”\(^{21}\).

At the all-India Level in 1897 the government had toyed with a draft bill on segregation and confinement of leprosy affected people. The bill had been widely circulated for comments to a wide cross section of the population, including colonial officials, European and Indian Medical men, some Native Chiefs, and other groups such as learned and scientific societies. Their responses suggested that partial confinement was not a solution to the problem of leprosy transmission in India\(^{22}\). The report also focused on the establishment of leprosy asylums, the forcible “segregation and medical treatment of Pauper lepers” in whom the process of ulceration has commenced\(^{23}\). It also gave official recognition to the asylums as the institutions for leprosy and channeled grant-in-aid to them. Medical intervention took place within these parameters. The asylums, mostly managed, by Christian missionary organizations offered a particular kind of medicine and medical practices and according to Gussow “church affiliated agencies have dominated the field of leprosy work worldwide (and also India) to the present day”\(^{24}\).

This is how the concept of leprosy asylum was started and the statistical data of 1911 shows that there were some 73 asylums existing in India catering to the

\(^{21}\) Quoted in British Medical Journal, 1897, ii : 1273.
\(^{22}\) Times of India, 12\(^{th}\) April, 1889.
\(^{23}\) Lepers Act, also known as Act No.111 of 1898.
\(^{24}\) Gussow, oppo.cit. p. 10.
medical needs of about 5,000 patients, or 4.7 percent of the leprosy sufferers. By
1916 the number of asylums had risen to 81. In 1921 there were about 94 leprosy
asylums in India and of whom, 73 were in areas under direct British rule where
majority are maintained or supported by Christian Missions. While the remaining 8
are under the supervision of Native Chiefs and Philanthropic Societies. When India
secured independence in 1947, there were 231 centres or asylums for leprosy sufferers
accommodating 28,000 patients most of them run by Christian missionaries wrote the
distinguished leprologist Dr. K.V. Desikan in 1981.

Mahatma Gandhi was very interested in leprosy problem and wanted
Indians to make an individual’s effort to eradicate it as their sole criteria. Gandhi
himself said : “It is largely the missionaries who to their credit bestowed care to the
leprosy sufferers. All honor to them”. (and he added) “but what of ourselves?”

The Christian Missionary care for leprosy was a complex interaction
between medicine, medieval practices, and religious observances, all of which were
modified by the responses of patients. For the Christian missionaries, the leprosy
asylum was the favoured institution. It has “combined the functions of prison,
monastery and alm house, and responded to the need for seclusion and segregation”,
leprosy homes were more in the nature of sanctuaries than medical institutions.

25 Census of India, 1911, part 1, Calcutta, 1913, p. 335.
26 Home Medical, August 1917, Nos. 36-61, National Archives of India, New Delhi, hereafter NAI.
27 Frank Oldrieve, Indias Lepers; how to rid India of Leprosy, London, Marshall, 1924, pp. 53-5.
28 Shetty, K.V. untold Truth about Leprosy, Sahitya Academy, Mangalore, p. 82.
29 SG Browne, ‘Some aspects of the history of leprosy : The Leprosie of yesterday’, Proceedings of
Further, in most all the asylums it was aimed to practice the Christian religious service and it has become important part of the asylum culture, a view which was echoed by missionary sponsored publications\(^{30}\).

Gerchard Armauer Hansen, who was first to identify curative agent of leprosy also advocated the segregation strategy. He was one of the scientists who was responsible for the formulation of Norwegian Law on the people diagnosed with leprosy. The law stipulated that all patients had to be isolated in a separate homes or leprosy settlements, if necessary with the help of police\(^{31}\). This theory of segregation of leprosy patients has become a popular feature at Scotland and other parts of Medieval Europe. Further, gibbets were appointed to guard outside the leprosy hospitals to warn patients who might had the ideas of escaping\(^{32}\). Although such compulsions drove the leprosy diseased underground and kept them in confinement, it is to be noted how Medieval European people tried to avoid leprosy patients from healthy people.

**VI(b). LEPROSY ASYLUMS – SEGREGATION OF SEXES**

The medical practices, separation of leprosy patients, confinement, and segregation of the sexes in asylums have become major issues in course of time. For those who believed that leprosy was infectious, confinement of all patients and separation of the sexes were means of breaking the chain of infection. But there were

\(^{32}\) Sidney Gaunlett, op.cit. p. 45.
medical problems in implementation, quite apart from the social dislocation and economic aspects of segregation. From 1880s, segregation increased, bypassing sanitary opinions. Vagrant patients were placed in asylums, which were removed to the outskirts of towns.\(^{33}\)

Segregation of the Sexes in asylums has become another product of a complex interaction between medicine, missionaries, and the colonial state, and it was widely opposed by patients especially in India. They believed that there was no scientific reason to show that leprosy was transmitted sexually; and the small number of healthy children born to leprosy patients in asylums made segregation unnecessary as a preventive measure.\(^{34}\) Yet separation of the sexes in asylums in India increased during the last decade of 19th century and missionaries were eager to enforce this. As a religious and medical practice, sexual segregation had a dual lineage, and the indigenous patient had to come to term with both. In the Indian tradition it was not uncommon for a leprosy patient to be accompanied either by a healthy wife or healthy husband to an asylum.\(^{35}\) Hence, there was great resistance to separation policy in the asylums, and it was another factor which deterred leprosy sufferers from seeking admission in asylum/hospital, and it also prompted escapes. Violations of the rule was often punished by excommunication from the asylum and if the patient is a Christian even from the Christian congregation.


\(^{34}\) Ibid, p. 224.

Further in the leprosy asylums in India, a lopsided situation has developed, with a high degree of interest and investment in experimentation with possible cures for the disease, while basic facilities such as bandaging and care of ulcers, or providing medicines for other ailments were neglected. Some of the more popular treatments were based upon rubbing the body with various oils\textsuperscript{36}. The most enduring was that of Chaulmoogra oil, which is derived from seeds of Taraktogenos Kurzii\textsuperscript{37}. Thus the developments in medicine in the early decades of the twentieth century initiated a break with the past, and redefined the medical representation of leprosy. Microscopic examinations and improved laboratory techniques also increased the hope of cure for those patients in the early stages of leprosy. This has resulted that asylum after asylum adopted these Medical practices. This was the case at the Travancore asylum in 1920, the Champa asylum in 1921, and the Subathu asylum run by the Brethem Mission since 1913. At the Travancore asylum, the Church Missionary Society initiated the hypodermic treatment in 1920. Asylums such as Purulia offered out patient services during week ends\textsuperscript{38}. Many Christian missions set-up clinics and dispensaries exclusively for leprosy in out lying districts. In Bengal the Church Missionary Society had dispensaries at Manicktolla, where 11,036 injections were given in 1931\textsuperscript{39}. But calls for segregation continued. The statesman carried a report in January 1933 calling for compulsory segregation of all patients\textsuperscript{40}. In Andhra Pradesh also separate wards were arranged for male and female patients at asylums such as Saluru, Vijayanagaram,

\textsuperscript{36} Ibid, p. 419.
\textsuperscript{37} Wyndham Cottle, ‘Chaulmoogra oil in leprosy’, British Medical Journal, 1879, I : P.P. 968-969.
\textsuperscript{38} Purulia Leper Hospitals : annual medical report 1931.
\textsuperscript{39} Medical report for the C.M.S. leper Dispensaries, 106/1, TLM.
\textsuperscript{40} Statesman, 27\textsuperscript{th} January, 1933.
Ramachandrapuram, Narasapur and Bapatla to perpetuate the missionary policy as seen elsewhere in the country.

V(c). ASYLUMS AND RELIGIOUS CHARACTER OF CHRISTIANITY

The religious character of the asylums including denial of freedom of worship and the Christian teaching has produced inhospitable conditions. In majority of the asylums, the missionaries insisted the Christian religious instruction as they believed that the very aim of organizing, funding and maintenance of the asylum was to encourage conversions to Christianity. Hence in the asylums, Churches were constructed and Pastors Catechists and Bible woman were appointed to promote Christian worship. This has produced dual results. Since the admitted lepers belong to different categories, castes and religious backgrounds, considerable number of patients did not accept the Christian religious instruction and some of them refused to join in the asylums run by Christian missionaries, although conversion to Christianity was considered mandatory. Rev. J. Uffman, the Superintendent of Purulia asylum at Bengal declared that “I do not allow the inmates to worship idols, nor do I insist them to become converts. Every inmate is allowed to remain in his own religions”.

This view was countered by Ganesh Dutta Singh, the then minister of Local. Self Government for Bihar and Orissa who visited Purulia asylum in 1925. To quote his statement that “Many who enter as Hindus come out as Christians… It does not look well to make it a place of conversion. No doubt it is also a fact that they are not

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42 Indian office Records, 1924, V. 4740.
compelled to adopt Christianity. But the atmosphere of the asylum is such that incentives towards conversion to Christianity becomes to some extent irresistible.34

This approach of conversions by missionaries was resisted by the patients at several asylums and it led to several consequences. To quote one incident at Ramachandrapuram asylum in Andhra Pradesh run by Canadian Baptist Church, that unrest began in 1938, with some patients protesting against its religious character. The Christian medical officer of the asylum wrote: “they were inducing our Christian inmates to wear caste-mark and not to attend Church Services.”44 Unrest dragged on for several months and the inmates went on strike in March 1939. The management of Canadian Baptist Mission, felt that the Christian character of the asylum was undermined and hence it resorted to closure of the asylum for some time and later re-admitted only those patients who agreed to submit to the rules and regulations of the asylum run by them. Thus dual freedom was established in the asylum i.e., it is free for patients to come, and to leave; it also became mandatory for the management to receive and discharge the patients at their own will and pleasure.45

**Governments and Leprosy Acts**

Not only the society considered the leprosy patients as social out castes, but attached stigma to them and kept them as much as possible in the asylums run by voluntary and Christian missionary organizations; the colonial government prior to

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44 Letter from Dr. D L Joshee to Mission to Lepers, 23 October, 1938, 113/1, TLM.  
45 Letter from Donald Miller to Mission to lepers, 9th April, 1939, 113/1, TLM.
independence to India and Union government after independence have passed several acts and laws to protect the majority healthy people from the minority leprosy affected patients. These include:

1) The Indian Lepers Act, 1898.

2) The Hindu Marriage Act, 1956.


4) The Muslim Marriages Act, 1939.

5) The Indian Christian Marriage Act, 1928.

6) The Indian Railway Act, 1890.


The earliest legal enactment was the Indian lepers Act of 1898. The objectives of the act, as indicated in its title are, “to provide the medical treatment to the pauper lepers and the control of lepers following certain callings”. It is applicable to the whole of British India, including upper Burma, but only comes into force in any district on a declaration by the local Government to that effect.

A leper is defined under the Act as “any person suffering from any variety of leprosy in whom the process of ulceration has commenced”. While a “pauper leper”

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46 Navin Chawla, op.cit., p. 62.
is one who publicly solicits alms or is at large without any ostensible means of subsistence.

The act was largely employed for⁴⁸

I. Segregation of beggars suffering from leprosy.

II. Disallowing leprosy patients from food preparation for sale, or handling eatables, drinks, drugs, clothing etc.

III. Forbading the leprosy patients from using public wells, tanks, taps etc. for purpose of bathing and washing.

IV. Restricting leprosy patients from working as barbers, cooks, domestic servants etc.

V. Disallowing leprosy patients from using public vehicles or transport.

VI. Debarring leprosy patients from inheriting ancestral properties.

The act was passed when the people were ignorant to make any distinction between infectious and non-infectious types of leprosy. It was based on the presumption that the leprosy affected were afflicted for life. It is only against such a background that one can hope to understand the rationale for such stringent clauses as sections 9 & 11.

Section 9 of the Act authorizes for the also appointment of inspectors and magistrates for lepers and authorizes them to impose penalties for disobedience which

⁴⁸ Navin Chawla, op.cit., p. 63.
include cash fines and even imprisonment for infringing any of its sections. Section 11 holds an employer responsible for giving jobs to leprosy patients punishable by law. The Act provides for the establishment of segregation camps for such patients as are found to be in notified areas.

The Railway Act of 1890 as well as other legislations prohibits the leprosy affected to number of areas including travel and transport of goods and obtaining other facilities in Railways\textsuperscript{49}.

Similarly, the various local Self governments passed enactments in the nineteen thirties to forbade entry of the leprosy affected from public places and utilities with an emphasis on keeping urban areas free of the disease.

The Motor vehicles Act of 1979\textsuperscript{50} disqualifies a leprosy patient from obtaining licence to drive a vehicle, despite the fact that not all leprosy patients have sensory loss of their limbs. Until very recently, the premium of Life Insurance companies are higher for the leprosy affected on the wholly incorrect premise that the leprosy affected has shorter life span\textsuperscript{51}.

Military service is not always open to the leprosy affected, even when the form of leprosy is negative. Election booths in some places are separately arranged for the leprosy affected, and sometimes manned by the leprosy affected. Leprosy beggars are frequently transported in separate municipal vehicles, lodged in leprosy homes

\textsuperscript{50} Ibid, p. 64.
\textsuperscript{51} Ibid.
apart from other beggars and some municipalities even separate them in death by cremating them in separate crematoria.\(^{52}\)

While the various marriage acts such as Hindu (1956), Muslim (1939) and Christian (1928) provide legal cover for divorce on grounds of leprosy, (which was confirmed by the Supreme Court in a case as late as 1973), in the vast majority of cases, particularly in rural areas, the leprosy affected spouse is merely “abandoned”. Customary practice coming to fore, the abandoned half, more often than not the wife, is unable to assert any legal right\(^{53}\).

It was against these offending arid anachronistic clauses that Scientific and enlightened opinion began to protest, particularly against the clauses equating leprosy with pauperism. In Maharashtra, it took more than three decades of relentless effort before the word “pauper” was deleted yet the word ‘leper’ remained in title and substance\(^{54}\). The Government of Punjab also considered the matter but came to conclusion that it cannot enforce the acts, not on the ground that they are unnecessary but the enforcement would be difficult and costly. Taking these objections into consideration, the Central Government on October 1, 1983 finally repelled some provisions of these acts in their application to all the States and Union Territories\(^{55}\).

In this context it may be noted that the law is an important social institution, and although it is from time to time overtaken by traditional customs, beliefs and

\(^{52}\) Ibid.


\(^{54}\) Navin Chawla, op.cit., pp. 64 – 65.

\(^{55}\) Ibid.
folklore, it does nevertheless establish societal trends. To help break several centuries of stigma it is essential as a first step to dismantle the old apparatus. Thereafter, some degree of protection should be built in to accelerate the process of rehabilitation.56

**Leprosy asylums and Child Care**

The healthy children of patients suffering from leprosy are taken care of by the missionaries while their mothers undergo treatment in the asylums. Some children are received in infancy, immediately after birth and removed to separate wards until such time they completed 5-6 years of age. In some missionary hospitals, wherein the impact of modern treatment has not been fully felt and for leprosy, at least a life time in an institution is still reckoned with. Hence special schools are arranged for patients at almost all the mission hospitals where teachers are usually patients, often cured and became members of staff.57

At times the healthy young children of leprosy mothers present several problems. This has been tackled by the missionaries in different ways in different centers. If the children are to remain with their mothers they are likely to become infected. Hence the children are separated from their parents and are either kept under the care of their relatives or in special institutions.58

Such separation usually inflicts psychological trauma among the children and may affect them for a life time. Hence a nursery adjacent to the settlement is

58 Ibid.
arranged where children from birth to 5 years of age are cared partly by the mother, who wears protective gown and mask when handling her child, and the remaining time by nursery nurses. This is a compromise adopted by some missionary asylums to remove some of the disadvantage of complete separation. But the recent tendency is that the children are allowed to stay with their parents and are given dapsone drug in mild form as given to nursery children in expectation of avoiding infection. The safety of this procedure is not yet certain, but it could be the answer for the future.\(^{59}\)

**Educational Aspects**

Adult education is not forgotten and quite a few adults while they were taking treatment have become literates, opening to them the avenues of different vocations and the wonders of the word of God. The adult education facilities are found in the asylums of Saluru, Vijayanagaram, Ramachandrapuram, Narasapur and Bapatla. The statistics of 1925 to 1945 shows that there were nearly 189 Parents taking adult education in these asylums. The recreation is also provided to them in the form of film shows, athletics and sports. Often the patients are also allowed to perform Stage concerts. At the asylums at Salur, Ramachandrapuram, Narasapur, Vijayanagaram and Bapatla, Schools were started for children suffering from leprosy. All these children have the disease in one form or the other and are taking the necessary treatment whilst attending school. The school teachers themselves are cured patients who rendered voluntary service to teach from standards 1 to 5. As far as possible the children are

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kept in the asylums and allowed to go to their parents for all school holiday; so as to maintain close family ties and prevent the children from becoming institutionalized\textsuperscript{60}.

Most of the children who come from families where one or both parents have leprosy, so that they stand little chance of being accepted in an ordinary village school. Further, if the children have any degree of deformity they are debarred from schools from receiving education at all. Another problem met by the missionaries is that some of these children whose parents are beggars they have to follow their parents to different places in begging. Such children have virtually no hope of even improving their lot as they live in extreme poverty and as such cannot attend school regularly. Important too is that they are not likely to attend for regular anti-leprosy treatment either, and hence, the disease usually become advanced. It is for such children the asylums arranged hospitals for treatment and elementary schools for imparting education with attached hostels separately for both sexes. In the hostels Christian helpers are arranged to provide the physical and spiritual needs of the children. Although majority of the children discontinue school at 5\textsuperscript{th} standard, only a few go to high school, or vocational training institutes. This is how the healthy children of leprosy patients and the children already leprosy affected are treated in the asylums run by Christian missionaries in India and Andhra Pradesh\textsuperscript{61}.

\textbf{V(d) LEPROSY AND MEDICAL TREATMENT}

\textsuperscript{60} Information from the Souvenirs of Salur, Ramachandrapuram, Narsapur, Vijayanagaram and Bapatla.
\textsuperscript{61} Ibid.
The leprosy disease was known in Ancient Greece as elephantiasis (elephantiasis graecorum). Saint Giles, Saint Martin, Saint Maxillian and Saint Roman were associated with the practice. Several monarchs were also associated with these practices: among those were Elizabeth I, Henry III of England and Charlemagne62. 

At various times it appeared that the human blood was considered as a beverage or as a bath for treatment of leprosy and the blood of Virgins or children was considered to be especially potent. This practice seems to have been in practice in Ancient Egypt and also known in China where people were murdered for their blood. This practice appeared to have persisted until 1790. The use of dog blood was also mentioned in De Secretis Natgural63. Paracelsus recommended the use of lamb’s blood and even the blood from dead bodies for treatment.

Snakes also appeared to have been used according to Pliny Aretacus of Cappadocia and Theodorus. Gauche recommended Cobra venom for treatment. Boinet, in 1913, tried increasing doses of bee stings (up to 4000). Scorpions and frogs were used occasionally instead of snakes. The excreta of Anabas (the climbing fish) was also tried for the treatment64.

One of the first advances of treatment of leprosy away from the age of superstition into the modern scientific era occurred in response to the last endemic wave of leprosy in Europe when Daniel Danilssen and Carl Boeck published Im spedilskhed (on leprosy) in 1847 after their detailed investigation on the characteristics

63 Ibid.
64 Ibid.
of the disease. Later, in 1873, Gerhard Armaner Hansen, son-in-law of Danielssen was the first to identify the causative agent of leprosy as *Mycobacterium Laprae* when he discovered multiple rod-shaped bacilli while examining nasal biopsy specimen of a patient. This discovery of Hansen not only brought to light that the leprosy is an infectious disease and spread to human beings mostly by contact, but it also negated the other assumption that leprosy is hereditary, occurs to the sinners on account of their past or present sins or due to the wrath of divine punishment, etc. In this connection, it may also be noted that the disease is known to human beings for more than 3000 years and Hansen’s identification of leprosy bacillous in 1873 i.e. more than 150 years as human pathogen, but attempts by scientists and medical professionals to develop standard bacteriological or cell cultures remain unsuccessful even to this day.

**Chaulmoogra Oil**

A common pre-modern treatment of leprosy is Chaulmoogra oil extracted from the seeds of the Kalaw (a species of the genus Hydrocarpus) tree.

The oil has long been used in India and some of Asiatic countries as an Ayurvedic medicine for the treatment of leprosy and various skin diseases. It was also used in China and Burma, and was introduced to the West by Frederic John Movat, a professor at Bengal Medical College. He tried the oil as an oral treatment in two cases

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65 Sunil Dogra, Tarun Narang & Bhushan Kumar, “Leprosy – evolution of the path to eradication” in Indian Journal of Medical Research, 137, Jan. 2013, p. 18.
67 Sunil Dogra et.al., op.cit., p. 15.
of leprosy and reported significant improvements in an 1854 paper. The oil mentioned in the Ayurvedic texts was from the tree Hydrocarpus Wightiana known as Tuvakara in Sanskrit and Chaulmoogra in Hindi and Persian and grows abundantly in western ghats of India.

In Egypt the administration of Chaulmoogra oil was given to Sultan Hussain Kamal by his personal doctor Tortoulis Bey. In 1894 the physician administered subcutaneous injection of chaulmoogra oil to the Sultan as he was unable to tolerate oral treatment. After a treatment of 6 years and 584 injections, the patient Sultan Hussain Kamal was declared cured.

The difficulty with the use of Chaulmoogra oil was its administration. Taken orally it is extremely nauseating and produces gastric irritation. Given by enema the oil may cause peri-anal ulcers and fissures. Given by injection the drug might cause fever and other local reactions. Further, the injections did not find much favour with the patients as multiple needle punctures had to be given twice-weekly to deliver 6 ml of drug and were painful. Hence one American patient remarked “Chaulmoogra oil was to be taken internally, externally as eternally”. Hence the Chaulmoogra oil treatment was not proven meritorious to the patients satisfaction and hence lost its significance. Despite these difficulties, in 1916 Ralph Hopkins has

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68 Indian Anuals of Medical Science, 1894.
71 Sunil Dogra, et.al. op.cit., p. 20.
reported that in the advanced cases, 25% has showed improvement while in incipient cases, 45% reported improvement or stabilization of the disease\textsuperscript{72}.

The Chaulmoogra oil was the mainstay of treatment of leprosy for many centuries. As it did not provide complete stagnation or cure to leprosy disease, medical workers were constantly seeking new and more effective remedies. One such remedy was Gurjon oil, derived from a wood of a tree native to South India by Surgeon Dougall of the Madras Medical Service in early 1870. The application of the oil is through rubbing it on the skin. But the patients found difficult to rub it on the skin and hence it lost its significance. The injection of rhymol and cod-liver oil were also tried. But all these oils did not provide the required remedies for the control and elimination of leprosy and hence the use of these oils did not become popular\textsuperscript{73}.

The discovery of sulphone drugs chemically related to the sulphon amides and their effective use in leprosy revolutionized the treatment and management of this baffling and dangerous disease. Dapsone (Diamino-dipheny) was used first in 1947 and was heralded as “the miracle of caraville”\textsuperscript{74} to treat leprosy and became more widely available later. Given by mouth in table form, this drug has shown most effective results in the initial stages and also became a vital asset in treating the leprosy disease. But in course of time it was identified that it was only weekly bactericidal against M. Lepraee and considered necessary for patients to take the drug indefinitely.

\textsuperscript{72} Ibid.
\textsuperscript{73} Cocharne, R.G.A. “comparison of Sulphone and Hydnocarpus theraphy or leprosy”, \textit{International Journal of leprosy} (16) 1948, 139-44.
\textsuperscript{74} Dogra et.al : Leprosy Eradication, op.cit., p. 20.
When the sulphone drug was used alone, the M. Leprae quickly evolved antibiotic resistance and thus 1960s, the scientifically developed world’s only known anti-leprosy drug became virtually useless\textsuperscript{75}.

The search for more effective anti-leprosy drugs led to the use of clofazimine and rifampicin in 1960s and 1970’s\textsuperscript{76}. Later, Indian scientist Shantaram Yawalkar and his colleagues formulated a combined therapy using rifampicin and dapsone, intended to mitigate bacterial resistance\textsuperscript{77}. In the treatment of leprosy in Multi Drug Therapy the following drugs are used with the combination of two or three as per requirement.

1. Cap. Rifampicin
2. Tab. Dapsone
3. Cap. Clofazimine

Leprosy persons with pocibacillary (P.B or tuberculoid) leprosy need 6 months treatment that must be completed in minimum of nine consecutive months. This means P.B. Persons cannot miss a total of more than three plus during treatment. The Multibacillary (M.B or lepromatous) leprosy persons need 12 months treatment.

that must be completed in 18 consecutive months. All the efforts must be made to complete six pulses in 6 months for P.B. cases and 12 pulses in 12 months for M.B. cases\textsuperscript{78}.

**Recommended Doses of MDT for persons affected by leprosy\textsuperscript{79}**

<table>
<thead>
<tr>
<th>Type of leprosy</th>
<th>Drugs used</th>
<th>Frequency of Administration</th>
<th>Dosage for Adult (above 15 years)</th>
<th>Dosage for children (between 10-14 years)</th>
<th>Dosage for children (below 10 years)</th>
<th>Criteria of RFT</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.B. Leprosy</td>
<td>Rifampicin</td>
<td>Once monthly</td>
<td>600 M.G.</td>
<td>450 MG</td>
<td>300 MG</td>
<td>Completion of 12 monthly pulses in 18 consecutive months</td>
</tr>
<tr>
<td></td>
<td>Clofazimine</td>
<td>Monthly</td>
<td>300 MG</td>
<td>150 MG</td>
<td>100 MG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depsone</td>
<td>Daily once</td>
<td>100 MG</td>
<td>50 MG</td>
<td>25 MG</td>
<td></td>
</tr>
<tr>
<td>P.B. Leprosy</td>
<td>Rifampicin</td>
<td>Once monthly</td>
<td>600 MG</td>
<td>450 MG</td>
<td>300 MG</td>
<td>Completion of 6 monthly pulses in 9 consecutive months</td>
</tr>
<tr>
<td></td>
<td>Depsone</td>
<td>Daily</td>
<td>100 MG</td>
<td>50 MG</td>
<td>25 MG</td>
<td></td>
</tr>
</tbody>
</table>

**Advantages of MDT\textsuperscript{80}**

1. MDT kills M. Lepra (Bacilli) in the body. It stops progress of the leprosy disease, prevents further complications and reduces chances of relapse.

2. As the M.Laprae are killed, the patient becomes non-infectious and thus the spread of infection in the body is reduced to a considerable extent.

\textsuperscript{78} National Rural Health Mission, Health Manual, p. 53.  
\textsuperscript{79} Ibid.  
\textsuperscript{80} Ibid, p.P. 51, 52.
3. Using a combination of two or three drugs instead of one drug ensures effective cure and reduces chances of development of resistance to the drugs.

4. Treatment with MDT reduces duration of treatment, and it is safe, has minimal side effects and has increased patient compliance.

5. MDT is available in blister pack which is easy to store and take.

Accompanied MDT

Some people may find it difficult to come to the clinics every month, especially people who are living in far off places, remote areas that are cut off during rainy season or due to lack of proper transport facilities. Those people are given more than one blister pack at a time. In such a case, the physician should make sure that patient understands how to administer the medicine\textsuperscript{81}.

Taking these advantages into consideration, the expert committee of WHO recommended it in 1981, which was used world wide after 1982. These three anti-leprosy drugs are still used in the standard MDT regimens. None of them is used alone because of the risk of leprosy bacilli developing resistance. This MDT treatment was also quite expensive and hence it was not quickly adopted in most endemic countries in the beginning but WHO made arrangements to deliver it free of cost\textsuperscript{82}. In 1985, leprosy was still considered a public health problem in 122 countries including India.

\textsuperscript{81} Ibid, p. 58.
\textsuperscript{82} WHO expert Committee on Leprosy 6\textsuperscript{th} Report, \textit{WHO Technical Representative Series No.768}, Geneva, WHO 1988.
After India got independence, the foreign missionaries in leprosy asylums and hospitals supported by foreign Christian denominations gradually withdrew from the supervision of leprosy work in India in response to the Union Governments policies. In their place the Union and State Governments encouraged the Indian medical professionals to take up the leprosy work. Although there were ups and downs in the leprosy work in missionary asylums, gradually with the help of Union and State governments the work continued unabated and new programmes were also launched in the asylums from 1960’s and 70’s onwards\(^3\).

**The National Leprosy Control / Elimination Programmes in India\(^4\)**

The Government of India started National Leprosy Control Programme (NLCP) in 1955 based on Dapsone domiciliary treatment through vertical units implementing Survey Education and Treatment (SET) activities. It was only in 1970s that a definite cure was identified in the form of Multi Drug Therapy. The MDT came into wide use from 1982 in India, following the recommendation by the WHO Study Group, Geneva in October 1981. At the same time, the Government of India also established a high power committee under chairmanship of Dr. M.S. Swaminathan in 1981 for dealing with the problem of leprosy. Based on its recommendations, the Government of India changed the NLCP Programme as NLEP (National Leprosy

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Elimination Programme) and launched it in 1983\textsuperscript{85} with the objective to arrest the disease actively in all the known cases of leprosy. However coverage remained limited due to a range of organizational issues and fear of the disease and the associated stigma. At this stage in view of substantial progress achieved with MDT, the World Health Assembly (WHA) resolved in 1991 to eliminate leprosy at a global level by the year 2000\textsuperscript{86}. In order to strengthen the process of elimination in the country, the first World Bank Supported Project was introduced in 1993.

The 1\textsuperscript{st} phase of the World Bank Supported National Leprosy Elimination Project started in India from 1993-94 and was completed on 31-3-2000. This project involved a cost of Rs.550 crores of which World Bank loan was Rs.292 crores. During the implementation of this phase, the prevalence rate of leprosy in India was reduced from 24/10,000 population in 1992 to 3.7/10,000 by March, 2001.

The 2\textsuperscript{nd} phase of World Bank Project on NLEP started for a period of 3 years from 2001. The Project involved a cost of Rs.249.8 crores and of which World Bank loan is Rs.166.35 crores. This includes WHO loan of 48 crores for MDT drugs which were supplied free of cost. The Project successfully ended on 31\textsuperscript{st} December, 2004.

\textsuperscript{86} Ibid.
Since then the National Leprosy Eradication Programme continued in India with Govt. funds from January 2005 onwards. Additional support for the programme is continued from the WHO and ILEP organizations. MDT is to be supplied free of cost as of now by NOVARTIS through WHO.

In the year 2001, after the global elimination was achieved, a target was reset by WHO for the remaining 14 countries to achieve elimination on national basis by December, 2005. India was one of these countries.

The National Health Policy, Govt. of India, set the goal of elimination of leprosy i.e. to reduce the number of cases to <1/10,000 population by the year 2005.

The NELP took up the challenge with the active support of the state and UT Governments and dedicated partners in the World Health Organisation, the International Federation of Anti Leprosy Associations (IFALA), the Sasakawa Memorial Health Foundation, the Nippon Foundation, NOVARTIES, DANLEP (1986-2003) and the World Bank (1993-2004).

As a result of the hard work and meticulously planned and executed activities, India achieved the goal of elimination of leprosy as a public health problem, defined as less than 1 case per 10,000 population, at the National Level in the month of

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87 The National Leprosy Eradication Programme, Ministry of Health and Family Welfare, Govt. of India, 2005.
December, 2005. As on 31\textsuperscript{st} December 2005, the prevalence rate recorded in the country was 0.95/10,000 population\textsuperscript{88}.

\textbf{V(e). REHABILITATION}

Various aspects of the leprosy affected from times immemorial are looked upon both as a formidable problem as well as formidable challenge. As a problem its dimensions are insurmountable. Society with its deep-rooted ignorance and prejudice has traditionally tended to view leprosy not merely as a disease but as a sub-human condition. Further, it is believed that the leprosy is hereditary and also contagious, and incurable. There have been a host of difficulties on the control side as the disease has not always been diagnosed properly, nor has it always been adequately treated\textsuperscript{89}. Avoidable deformities, have continued to occur, fostering prejudice, attracting ostracism and continuing to cause “dehabilitation”. Despite significant advances on the medical side, traditional prejudices have continued to retain their grip on common perceptions. The net result is that the problem in absolute terms has been increasing instead of decreasing. Hence, attempting to cure the disease, treating and caring of the patients has become a challenge. In recent years this has led to renewed efforts to cure the affected, as well as rehabilitate those cured with respect to the patients’ sense of dignity.


The use of the term “rehabilitation” reflects recognition that the absence of death does not necessarily insure health. If the “cured” patient is unable to preserve or resume his place in the family or community as an independent, self-respecting, respected and contributing member, the healing process has not been completed\textsuperscript{90}.

**Rehabilitation - Definition**

Rehabilitation has been defined in several ways, each an attempt to express that it is a dynamic process. “The process must “ensure the fullest possible restoration of that which is lost by disease, injury, or congenital defect”\textsuperscript{91}. This concept is now extended by an awareness that “what has been lost” is also influenced by poverty, social and political injustices, and many other contributing factors.

The language of rehabilitation has tended to reflect a limited philosophy by using expressions such as “fullest possible restoration” or “return of a patient to normalcy”. There is a tendency to assume that the rehabilitation process begin only after all had been “lost”. The emphasis had been on “return”\textsuperscript{92}. The concept has been broadened by emphasizing that the process must begin “on the day of diagnosis”. That too is insufficient. We now know that an attempt must be made to anticipate causes leading to dehabilitation. “Preventive rehabilitation” therefore is a device to pick up broken pieces and put them together again in an operation theatre through surgery.

**Rehabilitation - Meaning**


\textsuperscript{91} Ibid.

\textsuperscript{92} Ibid.
Hence it is to be noted that there are twin aspects to be met in rehabilitation i.e. the establishment or re-establishment of economic productivity, and equally important is re-assimilation of leper in family and society. If only the former is met, the affected is vocationally settled but not rehabilitated. By rehabilitation the physical and mental restoration is achieved as far as possible, of all treated leprosy patients to normal activity, so that they may be able to resume their place in the home, society and industry\(^93\). To achieve this, treatment of the physical disability is obviously necessary but it must be “accompanied by education of the patient, his family and the public, so that not only can he take his normal place, but society will also be willing to accept him and assist in his complete rehabilitation”.

**Physically handicapped Vs Leprosy handicapped**

The problems of rehabilitation of those who got bodily deformities due to leprosy go beyond those of other handicapped categories, such as the visually handicapped, orthopaedically handicapped, the deaf and dumb and other handicapped groups as they are neither stigmatized nor uprooted. They are considered ‘different’ from the able-bodied, and hence largely remain within their own family, society and environment.

But it is not so in the case of leprosy affected, particularly after the development of deformity, are often physically uprooted, with consequent psychological impairment. Damage to hands and feet often requires the acquisition of

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\(^93\) Dogra et.al. Leprosy Eradication, op.cit., pp. 26 – 27.
new skills\textsuperscript{94}. Rehabilitation in such cases goes beyond the traditional ambits and takes on a deeper shade of meaning.

**Leprosy Disease Vs. Other Diseases**

Further it is to be noted that unlike a host of other diseases such as Cholera, Plague, Chicken pox, the Stomach or Heart problems, the suffering ends with the termination of the disease. But it is not so in case of the leprosy affected suffer. It is a moot point that the affected suffers equally bad when the disease is in progress or after the disease is arrested, because of the permanent deformities it causes to the body and stigma continues to operate and segregation from family and society continues to manifest itself in a number of spheres in varying degrees\textsuperscript{95}. It is this unique factor that even after the leprosy affected are completely cured, they may still be shunned by ‘healthy’ society, especially if they bear any previous manifestation of the disease, such as apparent deformity to hands, legs and the face. Unable to retain or reobtain employment, many patients face financial crisis and also are unable to find shelter even in urban ghettos, hence, they have no recourse but to set up clusters of their own\textsuperscript{96}.

There are two important concepts in rehabilitation among leprosy affected. The first is to understand and accept the need to help to establish or re-establish economic productivity among them as loss of employment after the discovery of the leprosy disease, it becomes very difficult for the patient to re-obtain employment

\textsuperscript{94} Navin Chawla, op.cit., pp. 66 – 67.
\textsuperscript{96} Ibid.
whether after infectivity or after the disease is ‘arrested’. Whereas many ‘healthy’ persons who have skill, ability and qualification find it hard to obtain employment now a days, it is doubly difficult for those who became handicapped due to the leprosy. If the parents are bread winners of the family, the whole family face starvation and financial crises due to lack of employment and financial source. Hence they have no alternative but cross the last barrier of Human Dignity and enter into the twilight world of begging or illegal activities\textsuperscript{97}. Hence it is clear that the leprosy is not caused by poverty but it leads to poverty.

Right, not charity, nor even compassion, must be the hallmark of such a rehabilitation policy. Experience has demonstrated time and again that the leprosy affected like other handicapped or disadvantaged groups, are willing and able to adopt old skills or learn new ones despite anaesthetic limbs and even deformity. Voluntary or Christian missionary agencies of the country over bear witness to efforts which have successfully trained patients to convert their disabilities into abilities. Employers have been able to testify that most of the handicapped, including the leprosy affected, work as hard if not harder than the ‘normal’ employees. That stigma and misconceived belief single out the leprosy affected for a life time of disqualification and not render a policy statement with any overtones of pity or charity\textsuperscript{98}.

\textsuperscript{97} Ibid.
Therefore a comprehensive approach to rehabilitation is needed to maximize the benefit for the individual family and Society at large. These include physical rehabilitation and social and economical rehabilitation.

**Physical Rehabilitation**

The physical rehabilitation includes physiotherapy, occupational therapy and corrective surgery. These devises are aimed to change the residual deformities and disabilities affected by leprosy to bring the individual as far as possible to normalcy in appearance and to do work. The disabilities and deformities in persons affected with leprosy occur mostly as a result of nerve damage. Damage to nerve results in impairment of automatic, sensory and motor functions leading to loss of sweating, anaesthesia, weakness / paralysis of muscles of eyes and extremities. Further it also results is insensitive hand or foot, stumped hands and legs, development of cracks, ulcers, septic hand/foot, shortening of fingers / toes and even mutilation of hands or feet and disorganization of foot or wrist.

These deformities can only be referred to specialists for surgical correction. Further, those patients who would be benefited socially, occupationally or economically are alone considered for surgery. In this connection, it may be noted that it was Dr. Paul Brand of Christian Medical College, Vellore, with the assistance of Dr. Hari Paul, began a determined study in 1948 of the causes of bone absorption that

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had been widely accepted as an inevitable consequence of the disease. In that same year, Dr. Brand and his colleagues undertook the use of tenodesis as a surgical technique to cure a persistent tropic ulcer on an inverted paralyzed foot. The study of photogenesis and potentials for the Surgical correction of deformity led Dr. Brand to do his first reconstruction of hand deformed by leprosy, using Stiles – Bunnel technique which had been well known and applied in hands deformed from other causes. During the years 1948-50, approximately 300 patients were operated upon by Dr. Brand and his team. Further Lt-Colonel Harry Williams, an experienced Plastic Surgeon established a department of Reconstructive Surgery at the Catherine Booth Hospital, Nagercoil, in 1962. Following the techniques used by Dr. Brand and Dr. Williams, the doctors of leprosy hospitals in A.P. such as Saluru, Vijayanagaram, Narasapur, and Bapatla, tried to relive the victims of leprosy, as well as of other crippling and mutilating diseases, could benefit from the latest surgical techniques; muscle tendon transfers to correct the effect of hand and foot paralyses, and plastic surgery to the face to minimize outward appearances and evidences of past leprosy disease.

In 1969 and after, the rehabilitation centers are established in almost all the asylums with craft work and even light industry training, affording sheltered occupation for disabled patients. In Christian leprosy settlements, once a patient comes for treatment, work begins in rehabilitating him physically, mentally and spiritually.

101 Ibid.
The Social and Economic rehabilitation

The missionaries encouraged the leprosy patients to think of the day when they return to their homes and community, cured and, in every aspect, a better citizen. They also aimed to restore among the patients as early as possible, the self respect, after the physical treatment is started. It is well enough the doctor helps to maintain the hospital or settlement by simple tasks which, in most of the settlements, the patients do in return for what they have received. In addition, they are also encouraged to do other works or learn other trades, so that they either work for themselves in farming or a trade and keep profits, or receive a small wage for their productivity.

Emphasis on Agriculture

The Emphasis is given in missionary leprosy settlements at Saluru, Vijayanagaram, Bapatla and Narsapur on agriculture as majority of the leper patients are farmers and in all the asylums sufficient land is at their disposal. In these centers, the patients are taught improved methods of agriculture on demonstration plots, using fertilizers, rotation of crops and the use of selected seed. A small poultry farms are also established at these settlements. Thus the increased productivity of the land has become a vital step to improved standards of living to leprosy patients. Some patients depending upon their physical condition are given training in tailoring, weaving, carpentry, basket work, needle work, brick and pottery making. Their occupational therapy gave good results and made patients happy, and out of mischief.

102 At all the leprosy asylums such as Saluru, Vijayanagaram, Narsapur and Bapatla hundreds of acers of land is available.
and prepared them to return to their community to practice their skills in their own lands and to reach out to others. Some learnt the building works also. The houses of patients in the settlements are usually built, under their instruction, by the patients themselves. In this way the missionaries tried to change the psychological and mental attitude of the leprosy patients and inculcated in them a feeling of confidence on themselves.

**Protective Sandals**

Among the causes of crippling in paralysis affecting fingers, toes and face; also loss of feeling in hands and feet so that no pain registers when these vulnerable parts are injured or become infected. The best answer is to treat the disease early before nerve damage occurs and, should it occur, to do all possible to protect hands and feet from injuries.

When the foot nerves are affected the missionaries provided to the patients protective sandals made usually by a trained patient from specially manufactured Micro Cellular rubber (MCR) and old motor car tyres. This is corroborated with the sandle manufacturing units in majority of leprosy asylums run by missionaries in India and also in Andhra Pradesh. To prevent burns and blisters the patients are also provided cooking utensils fitted with wooden handles or tool handles covered with rubber\(^{103}\).

**Home Care**

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\(^{103}\) The Leprosy Mission International Celebrating 125 years *Souvenir 1874-1999*, New Delhi, pp. 41 – 49.
Most significant, event during recent years in the treatment of leprosy has been the change of emphasis from institutional to home care. If prejudice and stigma were to be broken down sufficiently, the patients should be allowed to their place of living to remain at home, or return after brief hospital attention, provided the patient has regular modern treatment; such as MDT to escape from the problem of “rehabilitation”\textsuperscript{104}.

Another aspect of the missionary leprosy hospitals is that they have also arranged roadside clinics under the trees at pre-arranged places. The mobile dispensaries with a nursing sister are arranged to tour a wide area twice a month. At each point the hands and feet of patients are examined and checked for damage, tablets for a month are issued, and any sign of deterioration noted. Here also new patients are seen and brought back to the main hospital for full examination and initiation of treatment. By this system, which depends upon the co-operation of the patients, the average length of stay in the leprosy settlement has been markedly reduced to less than 12 months.

Heartening progress

In all the missionary leprosy hospitals in Andhra Pradesh hopeful signs are in evidence of the breakdown of ignorance and prejudice which has hindered leprosy treatment in the past and in some areas, marked success in the war against wide spread, distressing, now curable disease. The patient and devoted service of any workers through the centuries, often with little encouragement from visible results, prepared the

\textsuperscript{104} Navin Chawla, op.cit., pp. 90 – 94.
way for heartening progress made during the last two decades in battle against leprosy for surpassing achievement of the previous thirty centuries.

In no other field of medical science have Christian doctors been so obviously to the fore. The fight has been as much against deep-rooted fear and prejudice as against a bacillus and a disease and ‘perfect love casts our fear’. We thank God that for the past hundred years the Baptists, Lutherans and Salvationists have been privileged to play a part in caring for these sick people and bringing enlightenment to all. In this work of leprosy eradication / elimination, support of organizations and Christian friends throughout the world, including The Leprosy Mission (TLM), the British leprosy Relief Association (LEPRA), the Leprosy Mission of Britain and Newzealand, Oxfam, the Emmraus Suisse Society (Switzerland) and Help the Aged (U.K.) is laudable.

Conclusion

For so long, the missionaries and other voluntary organizations did very little for leprosy sufferers except practical demonstration of God’s love. Deep caring and readiness to share the suffering has brought many leprosy affected to accept Jesus Christ and his promise of eternal life.

From the day the first small sign of the leprosy disease was noted, they joined a class apart, socially ostracized, medically isolated, universally feared the society and for that matter, their families turned them out, sometimes caring little where they were. They were avoided in the streets and, not uncommonly, spat upon
simply because they were lepers. Those not fortunate enough to be taken and cared were all too often left in their hiding places ‘to rot’ and infect others. The stigma attached to leprosy has unhappily remained until recent times and even now persists in many parts of India and Andhra Pradesh, an attitude born out of ignorance. It is known that leprosy is not a curse; it is a disease caused, as many other illnesses afflicting mankind, by an infection, M. Lepra but much less so than tuberculosis and curable.

In the early days of the missionary work among leprosy sufferers the disease was hopeless. Few patients entering a colony (Asylum/Home) ever came out of them successfully and fully cured. Those who improved and were no longer infectious mostly returned before long to the asylums in a much worse condition.

At each funeral, the leprosy patients gathered round the graveside wondering whose turn would come next, not a few longing for their own day of release. In some the disease burnt itself out but left crippled wrecks who, even if their family would accept them back, could not care for themselves. Whatever its meaning in past ages has been there is, in the light of present knowledge, no justification for a highly emotional reaction to leprosy leading on the one hand to social segregation and idea of being ‘unclean’ nor, on the other hand, an exaggerated sentiment expressed toward those afflicted. Left untreated, the disease can cause almost-unparalleled suffering and mutilation.

Such neglect now is unnecessary and should occur less frequently as effective treatment became known and available to all in the missionary asylums and government leprosy hospitals. The infectiousness of the disease has certainly been
exaggerated, but the limited knowledge we have even today of how the disease is spread does not warrant a causal approach.