

A Model for the Healing of Leprosy in Korea

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1. History of Leprosy in Korea

The Republic of Korea is located in the Far East, with an area of about 100,000 square kilometers and with a population of about 43 million. It has a history of about 5,000 years. The first description on the symptomatology of a probable leprosy lesion (Table 1) is in Hyang-Yak-Gu-Gub-Bang (1) written in 1251. And the description of a definitive leprosy lesion can be found in Hyang-Yak-Jip-Sung-Bang (2) published in 1433. The presence of the endemic foci of leprosy in Cheju Island and the maritime territories was also explained in the same book (2). In 1445, the Great King Se-Jong established 3 leprosy care centers in Cheju Island with public fund. This was the first historical event of extending the highest ruler's humanitarian sympathy to leprosy patients in Korea (3).

Chaulmoogra was noted as an effective treatment for leprosy (4) in Tong-Eu-Bo-Gam, still used as a standard herb medical textbook, by Dr. Joon Huh in 1613. It had been used for the treatment of leprosy till 1950's, when dapsone (D.D.S.) was introduced into Korea. In 1909, R.M. Wilson founded a leprosarium in Kwangju, which later moved to Yeo-soo, where they had about 1,000 patients by 1960. Now it has become a rehabilitation hospital for leprosy patients as well as the general public. The institution donated its land to the cured leprosy patients to initiate a resettlement village. C.H. Ervin, in 1909, founded a leprosarium in Pusan under the auspices of Leprosy Mission (5), later taken over by a British Missionary, Mackenzie. And, it was closed during the World War II, and revitalized after the war, to become the current

Yong-ho Resettlement Village. In 1912, R.G. Fletcher, and American Missionary, under the auspices of Leprosy Mission, established a leprosarium in Daegu, Kyungbuk Province, accommodating about 1,000 by 1960, to become a resettlement village with about 50 of the healed.

During this long dark era of her history, the victims of leprosy had been the symbol of fear, rejection, prejudice, uncleanness, hatred, disfigurement, and segregation. And especially during the Japanese Occupation, before the end of World War II, the forced compulsory segregation was the official policy under the segregation law, and Sorok Island Leprosarium was established in 1916, by Japanese Government General, for the implementation of this strict policy. The leprosarium was so much feared and hated by the patients that the superintendent of this leprosarium, Dr. Suho, M., was assassinated by a patient to pay for the price of mistreatment and forceful segregation. It started with about 200 patients and later expanded to have 6,000 by 1935, but now, it has about 1,000 heavily handicapped and old victims. Other important events are summarized in Table 1.

2. Spiritual & Socio-economic Rehabilitation

-Hope Village Movement-

Right after the end of World War II, when the governmental control got loose, lots of groups of the leprosy vagabonds (estimated as about 5,000 patients) came out from hiding to the street for begging around, without any fear of the forceful segregation. They had one boss per group, organizing them and commanding what to do for their common interests. They were one of the most invaluable assets to J. Lew for getting essential information on the epidemiology of leprosy in Korea.

They had been rejected by everybody including their friends and even their own family members. They were forced and walked out of home only with a small bag and with different family as well as

first names because of a misconception that leprosy is a familial disease. Since then on, they had to beg the food, from door to door, for their survival. And they were determined to continue to be vagabonds, regardless of their social and/or economic status. Dr. S. Miki, an authority of Korean Medical History, described the status of the Korean leprosy patients in his book of "History of Korean Medicine and of Diseases of Korea" as following: "Because the general public hated and disliked this dreaded disease so much that they had to live in hiding or as vagabonds on the street, till they finished their lives." (6)

Majority of them (80%) were inflicted with their disease between the ages 10-25 (Table 2). So, in addition to the hatred, prejudice, rejection, and disfigurement, they did not have chances of getting proper education. J. Lew initiated a regular mobile clinic along with his associates at the Department of Microbiology, Severance Medical College in 1947. He also did an epidemiological survey, which showed the following. About 95% of the vagabonds (7) were proved to be physically fit for productive works in the survey (Table3). The survey also showed that they had to walk about 4 miles per day to beg the food they needed for their survival. Considering the fact that the majority of the vagabonds were bacteriologically positive without any effective treatment at that time, it was thought if the sufferers can get together and unite their labor power to produce something to support themselves, instead of begging, it could at least restore their human dignity, minimize the spread of the disease, and have some financial benefit to this country. There was no place where these victims would be accepted as workers, for sure.

Korean Leprosy Association was established in 1947 by a few voluntary people with the pioneering leadership of J. Lew, which became the present Korean Leprosy Control Association. The slogan of the association was love, good-will, and cooperation. Instead of begging around, settlements were arranged and they started to work to produce something to support themselves. This movement was

called as Hope Village Movement. We did have many logo's such as "We should love each other!", "We should have hope!", "We should keep order!", "We should not leave the tragedy to the next generation!", "We should work hard to support ourselves, instead of begging!", "We can do it!", and "When we die, leprosy should die, too!", etc., for their Spiritual Rehabilitation.

This movement spread throughout the country and 16 of these had been established accommodating about 5,000 patients till the break of the Korean war in 1950. As a result of these activities, most of the homeless victims of leprosy could settle and the begging was markedly reduced. This process of the restoration of their MANSHIP out of despair, helplessness, feeling of not being a human, hopelessness, love deprivation, outcasted and cut off from all normal human relationships, etc., was defined as Spiritual Rehabilitation. General counseling, discussions, and the religious and church activities brought HOPE and NEW LIFE to the victims.

But, the Korean War in 1950 dismantled almost everything in the Hope Village Movement. It was believed that through these activities, we could lessen the financial burden of our country and also block the spread of this disease. Also it was estimated in the spring of 1949 that the cost per patient at Hope Village was about 20% of that in Sorok Island Leprosarium where the patients were compulsorily segregated.

3. Socio-economic Rehabilitation-Resettlement Village Movement

The war in 1950 also inactivated the function of the Korean Leprosy Association, and it was revitalized in June 8, 1955, in which day J. Lew returned from the U.S. after 5 years of Ph. D. studies. And the new chemotherapeutic agent, D.D.S., and new concepts of leprosy were introduced. As a result, an outpatient clinic for leprosy patients was started in 1955 at the Department of Microbiology, Severance Medical College, and later it was evolved to World Vision Special Skin Clinic & Leprosy Research Institute, currently, Lew

Institute for Biomedical Research. J. Lew also founded these institutions and the delay of the outpatient clinic for leprosy patients in Korea was due to the segregation law, under which no one was authorized to care them at a general clinic. The publication of a monthly magazine VISION was initiated for the enlightenment, also pioneered by J. Lew. It was the first attempt to enlighten the general public on leprosy. Other measures of mass media, such as T.V., radio, comics, films, etc. were actively utilized for the propaganda.

I had thought if I could have cured leprosy, I would be a great man. So, I planned to give the Certificate of Cure and small amount of financial aid to the arrested cases along with the Minister of Health, Chung, Hee-Sup. However, the victims' viewpoint was totally different from mine. They thought I had broken their bowels (only tool they had as a beggar) by curing their leprosy (They could beg around because they were lepers.). There are proverbs in Korea: "Ten year study for nothing.", "When you don't want to give food to a beggar, don't crush his bowel.", and "When a man is saved from his near death drowning, he will ask the savior what happened to his bag."

I thought my 20 year intensive studies and struggles for leprosy victims were for nothing but to let them lose their bowels and bags. I was so much disappointed at the time, but after a deep thought, I decided to get their bowels and bags back to the victims, originally stolen by *Mycobacterium leprae*. This was the reason why I decided to initiate the Resettlement Village Movement for their Freedom, Happiness, and Prosperity. A nationwide survey (8) was planned and conducted by J. Lew, in 1962 for a new classification of leprosy (Table 4) for the social rehabilitation. About 20,000 institutionalized patients were given the extensive physical examinations and the cured or arrested and still active cases were differentiated and also the ones fit and the ones unfit for the physical labor were classified.

The physically fit and arrested victims were given two choices:

1. they could go anywhere they wanted; 2. they got together and settled in certain villages in a semi-cooperative farm system of their own. This movement was called the Resettlement Village Movement which was the innovation of the Hope Village Movement initiated in 1948. And the majority of the victims who had left for their original home or for some other places returned back to the resettlement villages, still rejected, disliked, and hated by everybody, with no place to go. The target population of this project was the arrested cases with no place to go and physically fit for the productive work. This was called as Resettlement Village Movement, which was for the Socio-economic Rehabilitation.

They did make their own choices and decisions: Whether or not they would stay at resettlement villages; and all we did was to give suggestions or advice, a little bit of seed money, and tools they needed. All the decisions were made of their own to run their own business and they did begin to learn to enjoy the fruit of their own hard work and choices at their own land of prosperity, the resettlement villages. The ones still active and uncured were given better medical care. The ones who were unfit for self-supportive labor and needed help were given shelters to stay in. Presently, there are about 100 such resettlement villages throughout the country, which have about 9,310 of the healed out of 27,099 of total registered cases as of 1988 (9). The poultry business and pig raising, which were thought to be one of the best fitting for the victims, because of the high income with less physical labor and to prevent the deformity, have become one of the major industries and many produce more than half a million eggs per day. The poultry product from the resettlement villages now occupies about 1/3 of that in Korea. The automation has been strongly recommended for the prevention of deformity and the effective management of the business.

In some urban type resettlement villages, even though their main industry at the beginning was poultry or pig raising, they have gradually evolved into a small scale industry, manufacturing

furnitures, parts for machinery, or nursery business, etc. Today, they have no difficulties in selling their products, using the public transportation, or sending their children to the public school. They are now the managers of these industries and the general public provides the labor under their guidance. Also their living standard is now even higher than that of some ordinary villages.

Anybody, also to stay at home, was allowed and received treatment. The long lasting compulsory segregation law was abolished in 1963. And in resettlement villages, up-to-date medical and farming technology were introduced. After 30 years of Resettlement Movement (42 years of the Hope Village Movement), many of the healed returned to normal society and many of the resettlement villages became just normal villages as to be integrated with general public. And their average living standard became even higher than that of the normal general public. They have no discrimination in public transportation, public gatherings or marketing their products. They have become a man with all rights and dignity. Even an active case of leprosy is considered as a patient with a disease called leprosy and no more subject of hatred or fear.

4. Physical Rehabilitation

-Chemotherapy, Physical Therapy, & Surgery-

Dapsone (D.D.S.) was introduced in Korea by R.G. Cochrane (10) in 1953 and the nationwide use of the drug was from 1955, and the WHO regimen for multi-drug therapy (MDT) has been implemented since 1982. S.J. Choi (11) reported the experience with the 55 patients on MDT. No relapse was noted in 27 MB cases, but two patients (7%) relapsed out of 28 PB cases, occurring 10 and 20 months after the completion of MDT. Their mean followup period was 2 years and 11 months. N.H. Kim (12) also reported the 5-10 year followup of 482 cases after the completion of MDT, and no cases of relapse were identified during the period of observation.

The prevalence rate on Korea was 0.38/10,000(1,637 cases) in 1990, and the incidence rate was 0.36/100,000 (157 cases) in 1990 (Figure 1) (13). The prevalence and the incidence rate of leprosy in Korea became below 1/10,000 and 1/100,000, in 1980 and 1983 respectively. And the WHO definition of elimination of leprosy as a public problem is defined to mean an average prevalence well below 1/10,000 and the average incidence of below 1/100,000 annually (14). So, according to the WHO definition (14), leprosy has already been eliminated in Korea.

5. Conclusion

A. The victims of leprosy in Korea are now happy and prosperous and they are not any more the symbol of fear, rejection, prejudice, uncleanness, hatred, disfigurement, or segregation. They now think that they are also human being, supporting themselves and furthermore, extending helping hands to others. They have no discrimination in public transportation, public gatherings, marketing their products, or sending their kids to general public schools. They have become a man with all rights and dignity. Even an active case of leprosy is now considered as an ordinary patient with a disease called leprosy and no more subject of hatred or fear. They restored their Manship fully (SPIRITUAL REHABILITATION).

B. Presently, there are about 100 resettlement villages throughout the country, which have about 9,310 of the healed out of 27,099 of total registered cases as of 1988. The poultry business and pig raising, which were thought to be one of the best fitting for the victims, because of the high income with less physical labor and to prevent the deformity, have become one of the major industries and many produce more than half a million eggs per day, The poultry product from the resettlement villages now occupies about 1/3 of that in Korea. The automation has been strongly recommended for the prevention of deformity and the effective management of the business. They are now the managers of these industries and the

general public provides the labor under their guidance. Also their living standard is now even higher than that of some ordinary villages. After 30 years of Resettlement Movement (42 years of the Hope Village Movement), many of the healed returned to normal society and many of the resettlement villages became just normal villages as to be integrated with general public (SOCIO-ECONOMIC REHABILITATION).

C. According to the WHO definition, leprosy has already been eliminated as a public problem in Korea. This is the result of the active campaign on regular treatment, especially the introduction of the WHO MDT regimen, other medical measures such as physical therapy, the corrective surgeries, etc., and most importantly the hard work of leprosy workers in Korea. I, in no way, mean to imply that the heavily handicapped and old victims do not need the intensive care and the help from the government and the charitable organizations, which they deserve (PHYSICAL REHABILITATION).

D. Here, I would like to define the word THE HEALED as the victims of leprosy satisfying the following three principles.

1. SPIRITUAL REHABILITATION
2. SOCIO-ECONOMIC REHABILITATION
3. PHYSICAL REHABILITATION

E. It is noteworthy that this healing of our leprosy victims, satisfying all three principles mentioned above, could be achieved within one generation. Please note we started our modern leprosy campaign from one of the worst situations in the world. MORE THAN 700 YEAR OLD TRAGEDY OF LEPROSY IN KOREA HAS ALREADY BEEN BROUGHT TO AN END.

6. References

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Table 1. Historical Review on Leprosy in Korea

1251	Suggestive description of Leprosy in Hyang-yak-gu-gub-bang
1433	Definitive description of Dae-poong-na (large eruptive leprosy) in Hyang-yak-jip- sung-bang published in the era of the Great King Se-Jong
1419-1622	Records of prevalence of leprosy (Lee-cho-shil-rok)
1450	Erection of leprosy care institutions in Cheju Island
1909	R. M. Wilson founded leprosarium in Kwangju; and C. H. Ervin, in Busan
1913	A. G. Fletcher founded Ae-Rak Leprosarium in Taegu
1916	Governmental Leprosarium founded in Sorok Island and institutionalized the first 100 cases of leprosy
1932	Chosun Leprosy Prevention Association founded Expansion of Sorok Island Leprosarium up to 6000 Cases.
1945	8,000 patients institutionalized at Sorok Island, Ae-yang, and Ae-rak Leprosaria Many wandering leprosy beggars
1947	Mobile clinic initiated by J. Lew with his staff at Department of Microbiology, Severance Medical College Korean Leprosy Association founded with the leadership of J. Lew Hope Village Movement initiated by J. Lew Sung-Joa-hoe (association organized by the patients) Introduction of Promin by A. G. Fletcher
1953	Introduction of DDS by R. G. Cochrane
1955	Leprosy out-patient stationary clinic founded by J. Lew
1958	Korean Society of Leprologists organized with the leadership of J. Lew
1959	Joon Lew established World Vision Special Skin Clinic (--> Lew Institute for Biomedical Research)
1961	The 5-year plan for the leprosy control proposed by J. Lew Nationwide leprosy survey by J. Lew with his team Korean Leprosy Bulletin published by Korean Society of Leprologists Resettlement Village Movement initiated by J. Lew
1962	Large scale resettlement projects 22 out-patient clinics WHO participation
1963	Started a monthly magazine "Vision" for the enlightenment on leprosy by J. Lew
1964	Abolishment of Compulsary Segregation Law
1965	Mass sample survey at Wolsung-gun
1969	Establishment of Hansen Association (association of the healed)
1976	Establishment of Korean Leprosy Research Institute
1977	Establishment of KALSO (Korean Association for Leprosy Service Organization)
1982	Implementation of WHO MDT program by the government

Table 2. Age of Onset (1948)

Age \ Sex	Male	Female	Total	%	Cum. %
1 - 5	7	8	25	0.8	80.6
6 - 10	120	174	294	9.3	
11 - 15	366	443	809	25.5	
16 - 20	460	466	926	29.7	
21 - 25	315	201	516	15.3	
26 - 30	218	113	331	9.7	19.4
31 - 35	118	54	172	6.38	
36 - 40	58	34	92	2.9	
41 - 45	39	18	57	0.2	
46 - 50	25	12	37	0.1	
51 - 55	12	6	18	0.05	
56 - 60	8	6	14	0.05	
> 61	-	5	5	0.02	
Total	1,746	1,550	3,296	100.00	100.00

Table 3. Physical Fitness for Labour
Based on Deformity of Leprosy Vagabonds
(1947)

Physically Fit to Work	No	%
Heavy work, grade I	992	49.3
Moderate work, grade II	375	18.7
Light work, grade III	530	26.4
Subtotal	1,897	94.4
Physically Unfit to Work	No	%
No need of assistance, grade IV	35	1.7
Need of assistance, grade V	77	3.9
Subtotal	112	5.6
Total	2,009	100

Group I: Very light cases, physically capable of heavy labor as normal person

Group II: Those, capable of enduring ordinary labor

Group III: Those, only capable of light labor

Group IV: Those, able to do self-care but physically unable to labor at all

Group V: Far-advanced, disfigured or old patients who need someone else
for daily life

Table 4. Classification of Accommodated Leprosy Patients
for the Social Rehabilitation

Bact Grade	Positive					Negative					Children	Others	Total		
	I	II	III	IV	V	I	II	III	IV	V					
Institutes															
National Hosp	590	1,006	968	835	361	956	880	778	1,228	646	185			8,353	
Private Inst	625	729	464	412	114	2,690	2,000	1,391	863	263	1,648	428		11,627	
Subtotal (%)	1,215 (6.8)	1,735 (8.7)	1,432 (7.2)	1,247 (6.2)	475 (2.4)	3,646 (18.2)	2,800 (14.0)	2,169 (10.9)	2,091 (10.5)	909 (4.5)	1,833 (9.2)	428 (2.1)		19,980 (100)	
Total (%)	4,328 (21.9)		1,722 (8.6)			8,615 (43.1)		3,000 (15.0)			1,833 (9.2)	428 (2.1)		19,980 (100)	
Physically Fit to Work(%)		+					+						+		
Social Rehab (%)		(21.9)				(43.1)							(2.1)	(67.1)	
								+	(69.4)					(69.4)	

Grade I : Normal appearance of normal person with normal labor capacity
Grade II : Suspicious appearance of leprosy patient with normal labor capacity
Grade III : Definite appearance of patient but with moderately impaired labor capacity
Grade IV: Advanced cases with capacity only for light labor
Grade V: Cases far-advanced and needing care

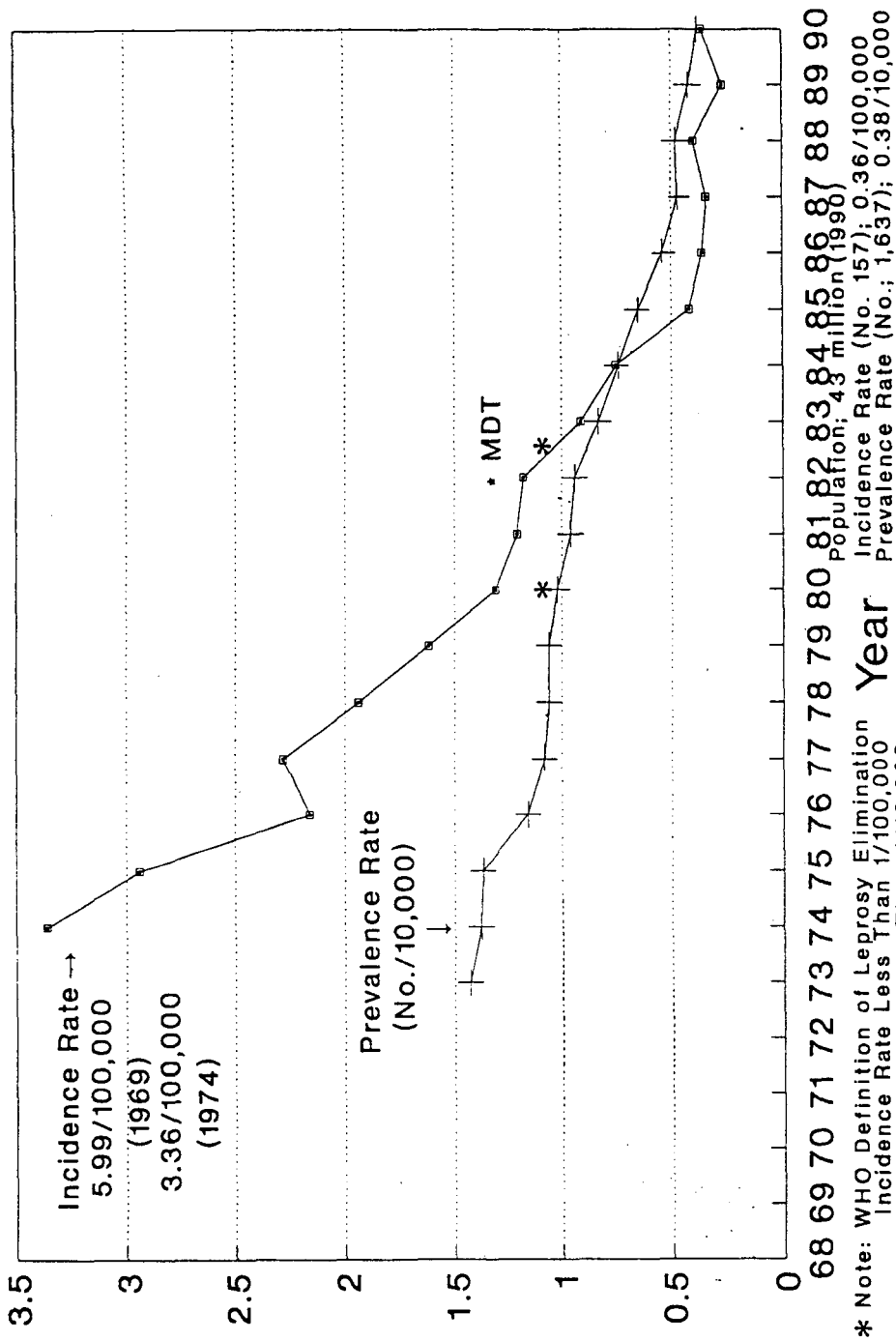


Figure 1. Incidence and Prevalence Rate: 1990