

Industrial Therapy in Leprosy.

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IT has been the custom in most of the older leper colonies just to take in the bad cases that come for life, feed, clothe, and care for them just as so many sick bed-ridden cases. In many of these colonies cooks, water carriers and servants are provided. In many instances, the spots of leprosy are no more of a handicap than so many freckles, and it is a serious mistake to allow these cases to do nothing. Occasionally, however, a leper is really sick and should be kept in bed. We find that work and exercise are most important in the treatment and should be encouraged as a therapeutic agency.

The leper offering the most hope of cure is the one in the early stages of the disease, and 95 per cent. of these are able to work and are the better for it. Our leper colonies should be schools, teaching (1) the three R's ; (2) personal hygiene ; (3) the importance of living apart and not giving offence to others after returning home ; (4) some trade or occupation. I am speaking of countries where only a selected number can be taken in. Cases should be selected and told distinctly that they are coming in for three or four years, and a definite line of work and study planned for them. They should be taught the signs of return of the disease, so as to be on the watch for it, also how to care for their own health after leaving. An idle brain is the devil's workshop with the leper, as with anyone else.

Every colony should have a farm, or at least plenty of garden land, where the patients can grow their own vegetables. For some years we have made it a rule to purchase no vegetables, and for the lepers to grow their own supplies. Our patients are also able to fish as we are on the sea. They also make all pans and buckets, and do much in the tin line ; they do all cooking and preparing of food, erect all buildings, and do the carpentry work about the place. They also make all their own clothes. There are other lines of work for which we hope to train them later, and they should even be able to keep books and records. Our lepers do 80 per cent. of their own medical work, and I hope to teach them to do the other 20 per cent. later. We make nothing for the market, but in some colonies this is done and the material is sterilised. The busy working leper is far happier, and will show better results in treatment, because his circulation, bowels, appetite and general health will be

better for the work. From an economic standpoint also there is great saving.

It is difficult to think of any disease where work and exercise are so essential as in the treatment of leprosy. Exercise is extremely beneficial to the healthy individual, and it is doubly so to the leper. While our industrial work was started for economic reasons, it is now proving to be one of the best agencies in treatment.

Let us take some of the symptoms of the disease and consider the possible benefits that might be expected from exercise.

Skin Symptoms.—As the disease is located mainly within the skin itself, it is more or less a skin problem, with hordes of the bacilli within the skin. It would be natural to expect exercise and massage of the skin to result in elimination of much of the poison from this route.

Nerve Symptoms.—Atrophy. The destructive process going on in the nerve endings results often in muscular atrophy. If untreated there is a gradual withering of certain muscles, but systematic and regular exercise will give muscular tone and help prevent a certain amount of this loss, especially if started early.

Neuritis is no small problem in leprosy, due, I suppose, to the irritation of the nerves from the toxins in the system. Some of these cases are benefited by mild exercise, though some can hardly bear the slightest motion of the limbs or body. The coal tar products, adrenalin and tetrodotxin should be tried. The latter drug is made by Sankyo and Co., a Japanese firm, from some poisonous portion of the globe fish, and is highly beneficial in many of the neuritis cases. In some cases it is the only thing to give relief and acts quite like an opiate.

Where there is exercise the circulation is also improved, and there is a better tone to the muscles, and more bacilli are eliminated. Elimination is a most important matter in treating leprosy, for since the chaulmoogra oil is supposed to destroy the bacillus it must be thrown off as fast as possible. Exercise brings into full play the kidneys, skin and bowels. Constipation is usually one of the great problems to deal with, due to the patients' sedentary life. One rule in our colony is that those not actively engaged in the various industries must take long walks daily. A beautiful highway through the colony, making a figure of 8, was prepared specially for this purpose. The appetite is much better in those at work, and the taking of an abundance of vegetables helps also to overcome the constipation.

The mental attitude requires special attention in treating lepers, and the most cheerful surroundings possible should be secured for them. Upon arrival the leper is down and out, discouraged and despondent, as all have told him that he has the greatest of all incurable diseases. He is feared by all, driven from pillar to post. What hopes could there be for improvement in such a mental attitude? Such a case must not be allowed to sit and mope and nurse a cold paralysed hand or foot. His surroundings should be cheerful, and he should be given a job which will shorten the day. Some task such as making a table, a bucket or a wagon gives him something to do and think about, and he will feel that life is worth living. A few copper coins at the end of his week's work will bring an added joy, and this helps to get many out of bed who would otherwise remain there.

Other diversions in our colony are music, games, field day sports, fishing, church services, school, etc. The effect of work upon the dosage of chaulmoogra oil is shown by the fact that our lepers who are at work can take a much larger dose of the oil with the least inconvenience, because of the favourable effect of exercise.

The work most suited for lepers is farming or gardening, which brings them into the sun and open air. The anticipation of the coming melon, pumpkin or other vegetable brings some joy and stimulates him to work. In our colony the occupants of each room form themselves into a club. Each club is required to grow its own vegetables, and the strong must help the weak. We have trained many as carpenters, stone masons, stone cutters, tinnerns, weavers, hospital helpers and nurses, and in other lines of work. All cooking, washing, sewing and such work is done by the lepers, and the only person employed about the institution is one healthy book-keeper or secretary. During the past two years 45 stone cottages and buildings have been erected by the lepers.

The following study was made of 277 of our cases who have been steadily at work, and showing good results from treatment.

128 stated that their strength upon entrance to the colony was only fair, and 139 very poor, but now after 12 to 18 months treatment the strength in 227 is very good and rather poor in 50.

In 247 the stiffness in their hands and joints has improved, but in 30 no improvement is seen. If advanced paralysis of the arm or limb has taken place very little improvement can be expected.

268 state that their sleep is good and sound, and only eight state that it is poor. Work certainly helps sleep. In 271 cases the appetite is good, and poor in six cases. In 221 no constipation is reported, but 56 are still troubled with it, in spite of the work.

We hold a big field day for sports twice annually, and rarely does a new case enter into these, but after work and

training in the colony many of these cases enter for the races.

As regard medical treatment, we use weekly subcutaneous injections of fresh hydnocarpus oil, with 2 per cent. camphor. We have used many combinations and various preparations, but found none so satisfactory and give so little pain as this preparation. In syphilitic cases we simply add half grain salicylate of mercury to the regular weekly chaulmoogra injection. Many of the syphilitic cases will show no improvement until the syphilis is treated also.

Dr Wade writes me that they encourage work in the Philippines. I noted in my visit to the Hospital No. 66, at Carville, Louisiana, that some of the cases were provided with jobs. Every leper colony should adopt the work system. "Faith, oil and work, but the greatest of these is work."

To attain good results in treating leprosy, early diagnosis with chaulmoogra oil, an abundance of out-door work, with as much cheer and diversion as possible, will bring about the most encouraging results in the majority of cases. Instead of housing hopeless lepers until their death, we should work towards making every leper colony an industrial therapeutic institution.