

ing that the disease ordinarily attacks cachectics or very old persons, in whom the disease would naturally run a malignant course, but I have found so many exceptions to this statement of the kind of person affected that I feel that his experience may have been different from that of many other writers.

As regards treatment, a most important point is to keep the teeth, mouth, nose and throat clean by proper alkaline and antiseptic washes in order to prevent secondary infection of the erosions and other lesions. It may be necessary to use some local anesthetics in case the pain is sufficient to interfere with eating and thus cause weakness. Cocaine, orthoform and morphine are of value for this purpose. The lesions themselves can be painted with nitrate of silver of varying strengths, iodine preparations, etc., but my own experience did not furnish satisfactory results. For internal treatment arsenic has some strong advocates. Dr. Bulkley of New York is quite earnest in his recommendation of large doses. As to other drugs, there is a great difference of opinion and no enthusiasm or encouragement that any of them have a surely beneficial action in retarding the progress of the disease. The general nutrition should be attended to very carefully, especially where there are painful lesions in the mouth or throat.

In Krieg's "Atlas der Kehlkopfkrankheiten," Stuttgart, 1892, are some excellent colored plates showing pemphigus of the mouth.

LEPROSY.*

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THE occasional appearance of imported leprosy in our midst, the difficulty of knowing how to deal satisfactorily with it, and the frequent errors in diagnosis made before the true nature of such cases is recognized, may serve as an excuse for bringing up this somewhat foreign subject.

Leprosy may be regarded as one of the most ancient of maladies which has maintained itself up to the present. Though rare in highly civilized countries, it is quite well established in South America, Africa and Asia. Even in Europe there are persistent foci in Russia, the Balkan States and in Norway. Occasionally a slight tendency toward greater diffusion is noticed, as in Eastern Prussia in 1896 from the Russian provinces. The great diffusion and prevalence of leprosy throughout Europe in the Middle Ages and its equally remarkable shrinkage and gradual disappearance after the fourteenth century are unique facts in epidemiology. It seems scarcely credible that there were 19,000 leprosy cases in Christendom, and that in France alone there were 2,000. The disappearance of the disease is ascribed to the stringent measures applied toward lepers, which consisted either in casting them out of communities and making them vagrants, or else in confining them in special hospi-

tals. In the middle of the past century the theory that the disease is inherited rather than caught was promulgated and defended by two Norwegians, Danielsen and Boeck. The clinical history certainly tended to favor this view, but the discovery of the *lepra bacillus* in 1879 and 1880 by Hansen and by Neisser gradually put an end to this theory, although as late as 1894, Dr. J. C. White of Boston still considered it necessary, in view of the persistent prevalence of the theory of heredity, to vigorously defend the theory of infection. In England some authorities believe that the consumption of fish stands in some relation to the disease.

The causal relation of the Hansen bacillus has been firmly established by examinations made in many parts of the world on different types of the disease. The disease is not readily transmitted, however, and prolonged exposure, as in family life, seems necessary to successful infection. Yet even in the family infection does not always follow. Koch mentions a mother who nursed and lost a husband and four sons during a period of twenty years, but remained free herself. Hansen states that none of the children of the one hundred and seventy Norwegian lepers who migrated to this country became diseased. This apparent hesitancy of the *lepra bacillus* to invade a new subject must not shut our eyes to the fact that we have an infectious disease to deal with, and one peculiarly offensive because of its prolonged duration and tendency to extreme mutilation of the body. The rapid diffusion of the disease in the Middle Ages, and in the Hawaiian Islands in the last century, indicates that perhaps some variety of this species of bacillus differing slightly from the one encountered to-day was responsible, and that some slight variation in the character of the bacillus may in part repeat the history of former centuries if our negligence permits it. Personal hygiene is not so highly developed in the densely crowded portions of our cities as to stand in the way of a spread if other conditions are favorable.

It is well known that leprosy appears under two clinically quite distinct types, the tuberculous and the anesthetic. To this a third, the so-called mixed or intermediate type, has been added. The anesthetic type, which is marked chiefly by lesions of the nervous system, is the type prevalent in those countries where leprosy has been endemic for long periods of time. The tuberculous is the more common type in foci of recent origin.

In the anesthetic type bacilli are scarce in the lesions. In the tuberculous type they are, as a rule, abundant. Within recent years attention has been drawn to the lesions of the nasal mucous membrane and to the presence of large numbers of bacilli in the discharge from the nose as a possible source of infection. Thus Sticker gives the following statistics obtained by an examination of patients in Calcutta, India. Of 57 cases of tubercular leprosy 55 showed bacilli in the secretions from the nose. In 68 cases of nerve leprosy, 45 had demonstrable bacilli in the nose. In 28 cases of the mixed type, 27 were discharging

* Kindly written by Dr. Theobald Smith, to take the place of his article on the same subject, read at the July meeting of the Association of Massachusetts Boards of Health.

bacilli from the nose. Kolle examined a large group of cases in the leper hospital of Cape Colony with the following results: *Lepra* bacilli were found in the nose in all of 45 cases of tubercular leprosy, in 22 out of 30 cases of the mixed type, and in only 21 out of 62 of the anesthetic type.¹ These figures suffice to show that the large number of lepers are discharging bacilli even in those stages of the disease in which ulcers of the skin are absent.

A disease which propagates itself so very slowly, and which makes itself known only in rare, isolated instances, does not create apprehension, and hence preventive measures are usually neglected. We have been told that lepers in the past have moved freely about in our country, using public conveyances and even Pullman cars without hindrance. It seems to us that every leper should be under the constant, vigilant care of public health authorities, and that some action should be taken by the general government which will bring the lepers of the country together in some lazaretto or home where they will be humanely treated, where they may enjoy the society of their kind, and perhaps do useful work. No state is at present in position to deal satisfactorily with these cases, as each has perhaps but one, or at most a few cases within its borders. In all the states there may be not over 100. In 1894 Hyde stated that up to that time 560 cases had been reported in our country.

The success of segregation in leper homes supported by the government is shown in the experience of Norway. There the admission to leper hospitals was at first voluntary, although every inducement was made to have the lepers leave their home. When they remained with their families they were compelled by law to occupy separate beds, and if possible, separate rooms. Clothing and eating utensils were to be kept separate from those of the rest of the family. All dressings for wounds were to be burned. If these measures are neglected the patient is transferred to a leper home. This relatively mild treatment has been signally successful in gradually reducing the number of cases. In 1856 there were 2,870 lepers; in 1900 only 577.

Though it may seem harsh and unnecessary to segregate and isolate those afflicted with a disease which incapacitates so little at first, and which seems so feebly contagious, the history of leprosy, imperfect as it is, bids us protect the family and the public at large, and this can be done most humanely by providing for the lepers a well-equipped hospital under the auspices of the national government, where the patients may be treated and the disease studied from the most advanced standpoint. This would relieve the various states of the burden of establishing and duplicating what would necessarily be unsatisfactory institutions on account of the few to be cared for, and create a center of information concerning this exotic malady.

¹ In a case of tubercular leprosy, quarantined in this state, we found last summer large numbers of acid-fast bacilli, some in the form of the characteristic balls or so-called glabii, in the swabs from the nose.

CHRONIC GASTRIC ULCERS. HOUR-GLASS DEFORMITY OF THE STOMACH. REPORT OF A CASE SUCCESSFULLY OPERATED.

BY CHARLES L. SCUDDER, M.D., BOSTON,
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A CASE OF HOUR-GLASS STOMACH AND STENOSIS OF THE PYLORUS. DYSPEPSIA FOR TEN YEARS. LOSS OF WEIGHT. OPERATION, GASTROGASTROSTOMY AND GASTRODUODENOSTOMY. COMPLETE RELIEF OF SYMPTOMS.

MARY C. MCK., thirty-eight years old; married. Hospital No. 137,601. East Medical Record 607, page 100.

This patient had influenza ten years ago. Since that time she has had more or less trouble with her stomach, complaining of dyspepsia and indigestion. The 25th of January, 1904, she was in a Marine Hospital in the West. She was given x-ray treatment for "ulcers in the stomach." Three weeks previous to entering the hospital here she noticed a beginning x-ray burn in the epigastric region. She is able to keep nothing upon her stomach and is being nourished by nutrient enemata. She complains of a great burning sensation in the pit of the stomach, which is relieved by vomiting. A few days ago she vomited two tablespoonfuls of blood. She has lost about twenty pounds in weight during the past four months. Her bowels move once a week without medicine. The percussion of the gastric area finds the lesser curvature of the stomach two inches above the umbilicus and the greater curvature three inches below the umbilicus.

June 6, 1904, operation was undertaken because of the persistent vomiting and evident obstruction. On opening the abdomen an hour-glass deformity of the stomach was found. At the pylorus were the adhesions occasioned by an old ulcer. A little to the pyloric side of the middle of the stomach was seen and felt a mass of cicatricial tissue constricting the stomach into two unequal parts, a smaller pyloric portion and a larger cardiac portion. The pylorus would not admit the little finger and only the tip of the forefinger could be made to pass with difficulty from one portion of the stomach to the other through the constricting area. These obstructing portions were evidently cicatrices of old and recent ulcers. There were no glands to be seen or felt. A gastrogastrostomy and a gastroduodenostomy were done. Both of these operations were facilitated by the use of rubber covered clamps, which prevented hemorrhage and the escape of stomach or intestinal contents. The mucous membrane removed from the stomach and intestine showed nothing abnormal. The bacteriological report upon the stomach and intestinal contents from the Pathological Laboratory showed a scum of colonies of colon-like and other bacilli. No micrococci were seen.

The patient recovered satisfactorily from the operation. There was apparently no shock, the temperature did not rise above 99° F. She made an uninterrupted recovery, being able to take with relish whatever food was proper for her, before she left the hospital. Immediately following the operation the patient was nourished by enemata of milk, egg and salt solution every eight hours. Salt solution was given also by rectum to relieve thirst. At the end of three days water was allowed by mouth. Upon the fifth day liquids, including broths, were taken. At the end of about a week soft solids were relished. The patient was up in eighteen days and went home, looking and feeling well and gaining in weight.

"Hour-glass stomach" is the term applied to an anomaly of form of the stomach. The stomach is narrowed at one part so that the cavity of the