## II. LEPROSY, LEPRA.

Leprosy is a parasitic disease of chronic course; it consists in the development of more or less circscribed inflammatory new-formations, mainly in the skin and in the connective tissue of the peripheral nerves. The disease is almost invariably incurable, without being the direct cause of death.

According to its localization, two great groups of symptoms arise, cutaneous or nervous, which have of old led to the erection of two different forms of leprosy—forms, however, which but rarely develop in complete purity.

Leprosy of the skin is called Lepra tuberculosas. tuberosa, s. nodosa, tubercular leprosy. Leprosy of the nerves, lepra nervorum, has received its titles from the most prominent symptoms: L. anastheticas. glabras. mutilans, etc. Between the two lie the mixed forms; consisting mostly in cutaneous eruptions, to which the symptoms dependent on the alteration of the nerves become superadded; more rarely the reverse occurs, the cutaneous symptoms succeeding the pronounced L. nervorum.

## SPECIAL PATHOLOGY.

## 1. Lepra Tuberculosa; Lepra Cutanea.

Although it is impossible to ascertain the date of the infection, a series of general morbid phenomena appears almost constantly which may be termed prodromal (premonitory symptoms)—symptoms not materially differing from those observed in other infectious diseases. There are gastric disturbances, anorexia, dyspepsia; great fatigue and somnolence, with intense vertigo, appear; they become associated with profuse sweats and frequently violent epistaxis. But the most important are attacks of pyrexia, sometimes of an intermittent, sometimes of quite irregular character. These symptoms, occurring at variable intervals and in different intensity, may precede the outbreak of the disease for months, even one or two years.

Those authors who had frequent opportunities of observing the onset of the diseas designate the premonitory fever as a constant symptom.

The prodromal stage is followed by the eruptive stage, initiated by an erythematous exanthem of gradual origin and spread, i. e., more or less deep-red spots which have a special predilection for the face, and next for the extremities; they are darker in the centre than at the periphery, may be of any size, and usually project uniformly above the level of the normal skin. Frequently the spots are slightly hyperæsthetic in their first stages or cause a certain feeling of itching. This macular form either disappears, leaving inconsiderable remnants of pigment, or else from these brownish-red spots spring tubercular neoplasms of nodular or more band-like form; often they can be felt in the depth long before, in the shape of nodular infiltrations. They sometimes spread peripherally, others grow in height; contiguous neoplasms become confluent, thus giving rise to gradual extensive infiltrations. As a rule, this process requires many months or years before the macules change into tubercles and diffuse infiltrations, or until the small, at first barely perceptible infiltrations in the corium will clearly project above the level of the skin in the shape of tubercular efflorescences.

In the further course of the disease we must follow, on the one hand, the future fate of every single node; on the other, the perpetual and irrepressible outbreak of the leprous new-formation on additional regions.

The individual nodules enlarge and appear as dark-red, soft formations; for month

they remain unchanged, at most assuming a more yellowish-brown color. The epidermis desquamates slightly, becomes rough, but is preserved. More acute necroses in the central portions of the tubercles, leading to softening, to gradual thinning of the covering layers of epidermis, and thus to shallow ulcerations, are not regular, but merely traceable to external influences. These ulcers are quite indolent, have sharply cut edges, and secrete copious quantities of thin pus from their rather smooth, badly granulating bottom. Having a slight tendency to recovery, they cicatrize only after having existed for a long time. The original hyperæsthesia of the tubercles soon gives way to a steadily increasing anæsthesia; the remaining thin flat cicatrices are usually entirely devoid of sensibility. At times, too, the tuberous eruptions vanish quite acutely with the appearance on the region in question of an erysipelas.

The parts most affected are: face and forehead, eyebrows, nasal and oral mucous



Fig. 22,—After a photograph sent me by Dr. Goldschmidt, of Funchal (Madeira).

membranes. On the extremities the points of predilection are: extensor surfaces of the knee and elbow joints, the dorsal surfaces of the hands and fingers; altogether the extensor more than the flexor surface. Every part of the body, however, may be attacked, except the scalp and the glans penis. The affected parts, of course, have their volume very materially increased, and the mobility of some limbs, for instance the fingers, is seriously interfered with; this is especially the case when the above-mentioned ulcerations establish themselves at these particularly exposed places. Quite typical, however, is the alteration of the face: by the diffuse deposition of the leprous neoplastic mass upon which secondary nodes and excrescences are again superimposed, broad wheals are produced which bulge out especially the frontal and supra-orbital regions; the cheeks gradually form thick, pillow-like protuberances on both sides of the infiltrated and nodulated, but broadened and flattened, depressed nose.