

disease is the fact that subjective symptoms are often absent, and never well marked. The patients are sometimes unaware of the existence of the rash until their attention is directed to it; but itching in moist regions is generally complained of, and occasionally may become severe, particularly when the patient is heated.

*Pathology.*—A microscopical examination of the skin shows that the disease is always a dermatitis. In a mild case such as the scaly form the inflammatory exudate is principally situated in the papillæ and around the hair follicles; while in the more severe grades it extends to part or whole of the cutis. The epidermis is always thickened and shows deficient cornification. Mitosis of the prickle cells, which is always present, is most marked in the papular and crusted lesions. The cells of the stratum corneum generally have distinct nuclei, and can be seen exfoliating from the surface, showing the epidermic origin of the scales found in this disease. There is no indication present in support of the view which was held by Hebra, Sr., that the squamæ were derived from the sebaceous glands. These latter, are, as a rule, unchanged. The sweat glands, however, frequently suffer from degeneration of the epithelial cells lining part or whole of their coils. The infundibula of the long hairs are always dilated and are completely filled with fat, horny and granular cells in the form of a conical plug which Sabourand has named "Seborrhœal cocoon." On account of their dilated mouths the hair follicles appear more hour-glass in form than normal. The hairs are atrophied and their sheaths frequently have a wrinkled appearance.

A bacteriological examination of the scales, crusts, and follicular plugs shows great numbers of bacteria, and many investigators have attempted to isolate the parasite of seborrhœa and seborrhœic eczema. As far back as 1874 Malassez in Germany, and Chincole in France isolated bacteria in connection with disease, but no inoculation tests were made. Later Unna isolated a mulberry coccus, to which he gave the monococci and with a culture of it produced alopecia in a rabbit. Inoculations on himself and on his assistant produced eczematous patches. Sabouraud in 1897 reported a method by which a pure culture of a micro-bacillus could be prepared from the scales and crusts and "seborrhœal cocoons." Inoculations with this bacillus produced typical patches of alopecia areata. Unfortunately he did not report whether or not it would produce a dermatitis. If Sabouraud's micro-bacillus should prove to be the parasite of seborrhœic eczema, then alopecia areata will have to be considered an acute form of the disease. Merrill, of Mass-