no interest in her surroundings. Marked salivation, noted when she first entered hospital, gradually subsided.

Physical Examination.—The pupils were normal. There were no ulcers in the mouth at time of admittance, but a small superficial ulcer of tongue was noted at one time during her stay in the hospital. A narrow pigmented line was noted on each side of the tongue near the margin and extending toward the tip. Similar pigmented areas were noted on the inner sides of cheeks. There were five badly decayed teeth. Lymphatic glands were generally palpable. Small, brown, pigmented spots were seen on various parts of the body and on the soles of the feet, probably luetic in origin. Examination of lungs, heart, and abdominal organs was negative. Nothing abnormal was noted on either arm, but on each elbow the epidermis was dry and darkly pigmented. Beginning at the middle third of each forearm, the skin was dry, very much thickened, especially over the hands, and black, looking very much as if the hands had been dipped into soot. The diseased skin was wrinkled and fissured in various places over the hands. The palms and fingers were involved as well as the backs of the hands. The nails were not involved. The thighs were normal in appearance, but the epidermis was somewhat thickened, wrinkled, and decidedly discolored over each patella, and the inner side of each knee. Extending from the lower third of the leg over the dorsum of each foot, and over the toes, the skin looked mummified—was black, scaly, dry, hard, and very much thickened. The skin was cracked in various places, and over the middle toe of the left foot had sloughed, leaving granulating tissue exposed. The toe-nails were normal. There were small, brown, pigmented spots on the soles of the feet; otherwise the skin was normal. The external genitals showed no ulcerations. The patient gave no evidence of pain when stuck with a pin over the affected areas of skin and over parts of the arm, but flinched when the body was touched. Knee-jerks were absent. The bowels were very constipated. The stools were neutral in reaction, and contained no eggs.

Urine: The patient passed urine in bed, unless vessel was given her at regular intervals. Examination of catheter specimen, May 23, showed: Reaction, acid; sp. gr., 1012; no albumin; no sugar; no cellular elements. Examination of 24-hour specimen of urine, June 16, showed: Amount, 1450 c.c.; reaction, acid; albumin, none; sugar, none; indoxyl, slightly increased; no casts; no blood.

Blood: Four blood examinations made by Dr. M. S. Levy, at different times during the patient's stay in the hospital, showed hemoglobin varying from 80 per cent. to 86 per cent.; leucocytes from 9,400 to 10,600; red cells from 4,500,000 to 4,610,000. The differential counts showed a variation in the small lymphocytes from 20.5 per cent. to 24 per cent.; large lymphocytes from 4 per cent. to 5 per cent.; polynuclears from 65.5 per cent. to 68 per cent.; eosinophiles from 4 per cent. to 5.5 per cent.; transitionals from 1 per cent. to 2.5 per cent. No plasmodia or other abnormalities were noted. Examination of smears and cultures from cerebrospinal fluid gave negative results.

Course of Disease.—The patient began to show signs of improvement soon after her admittance to the hospital, and by June 16, her mental condition was much better, although still sluggish. She was then able to be up, but would occasionally fall on attempting to walk across the ward; the diseased skin of the arms and hands had peeled (Fig. 1), leaving fairly normal tissue beneath, and the skin lesions on her legs and feet (Fig. 2) showed signs of improvement.

This case is of interest, because of the very marked presence of the three cardinal symptoms of the disease, salivation, mental disturbance, and peculiar skin lesions. The fact that the skin lesions did not appear on the face, but on the knees, is of interest in showing that exposure of the part to the sun does not always determine the location of the lesion.

PREVALENCE OF THIS DISEASE IN SOUTHERN STATES.

From correspondence with physicians in charge of different insane asylums in the south, I believe that pel-

lagra is much more prevalent in this section of the country, especially among the negroes, than we have any idea of at the present time.

Louis W. Sambon,⁴ in 1905, called attention to the peculiar fact that no cases had been reported from the United States, but said: "I believe it is far more common in tropical and subtropical regions than we are aware of at present."

ETIOLOGY.

It is by no means proved that damaged maize alone is capable of producing this disease, although this is the theory held by many authorities, especially the Italian investigators. So good an authority on tropical medicine as Sambon, and many of the Spanish investigators oppose this view, and give much evidence against it. Sambon says:

If I were to suggest a new theory of pellagra, merely as a working hypothesis, I should feel inclined to draw attention to the many analogies between pellagra and some of the protozoal diseases which have been recently worked out.

So far, only a few complete reports have been made of examinations of the blood and cerebro-spinal fluid, and as yet, no light has been thrown on the subject by work along this line. However, Sambon's suggestion offers a most inviting field for further investigations.⁵

NASAL MENSTRUATION.

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Patient.—Mrs. H., aged 55, German.

History.—She has always been well and has borne five children. Menstruation commenced at age of 13, and has always been regular, though with some pelvic pain and distress two or three days prior to flow. She entered the climacteric at age of 49. There were no unusual pelvic symptoms. However, as the regular monthly uterine menstruation diminished there was "nasal menstruation," lasting from two to four days, preceded by more or less severe headache. This condition lasted about two years when normal menstruation ceased and "nasal menstruation" became permanently established.

Examination.—I first saw the patient in December, 1907, almost two years after the last normal menstrual epoch. She consulted me on account of an enlargement in the angle of the right jaw in the region of the parotid gland. She stated that on the cessation of the menses the gland would become painful, and enlarged each month, while at the same time she experienced more or less headache. All these symptoms disappeared as soon as the nose bleed commenced. After a few months she noticed that the gland remained enlarged; it had gradually increased in size so that at this date it was as large as an apple. During the period of nasal hemorrhage the gland would "swell up" and after the flow disappeared would "go down."

Operation.—April 14. The entire gland was removed and the patient rapidly convalesced. On the third day following the operation the nose bled more or less freely though not exceeding 64 gms. *in toto*. The symptoms were identical with those of menstruation following oophorectomy.

Subsequent History.—The patient has had no more headache and no nasal hemorrhage and is in the best possible condition.

4. Remarks on the Geographical Distribution and Etiology of Pellagra, Brit. Med. Jour., 1905, ii, 1272-1275.

5. In addition to references already given the following may be consulted:

Pellagra Occurring in England, Practitioner, London, 1906, lxxvi, 679-685.

Examen du sang et du liquide céphalo-rachidien dans la pellagre, Compt. rend. Soc. de biol., Paris, 1907, lxxiii, 218.

Le traitement de la pellagre par l'atoxyl, Bull. Acad. de Méd., Paris, 1907, lxxiii, 139-142.