one to say definitely that the spinal cord was involved. It was only the gradual ascending character of the paralysis (Landry type) that some three or four months before death gave a clew as to a probable spinal involvement. The development of the symptoms and the appearances met with in the nerves make it clear that we had to do in the first place with a parenchymatous neuritis. The prolonged primary stage of numbness in all the four extremities, together with a prolonged period of simple weakness of the peripheral muscles, pointing to a distal parenchymatous multiple neuritis as the primary lesion."

It is cases such as these, cases which do not fit under the description of any of the well-defined clinical groups, which suggest the underlying common relation of all.

An analogy may be drawn from hysteria and neurasthenia. While it is comparatively easy to separate precisely those cases at the extreme ends of the series, nevertheless as we approach the center, such a distinction becomes oftentimes practically impossible, and we are driven to the necessity of speaking of hystero-neurasthenia. For similar reasons, after reviewing the clinical and pathological findings in the cases under description, I think the following conclusions have at least a tentative justification:

First: Toxic degeneration of the lower neurons, acute anterior poliomyelitis, peripheral neuritis and Landry's paralysis are essentially degenerative conditions of nervous elements.

Second: The exciting cause of this degeneration is a toxemia, which may be the result of bacteria, auto-toxins, or poisons introduced from without; and,

Third: The whole neuron, both cell and fiber, suffers in every case, the clinical symptoms, however, depending upon the intensity, the duration, and the anatomical situation of the morbid process.

Clinical Department.

FROM THE WELD WARD FOR DISEASES OF THE SKIN. MASSACHUSETTS GENERAL HOSPITAL.

Service of Charles J. White, M.D.

BY FREDERICK S. BURNS, M.D.,

Assistant Physician for Diseases of the Skin.

DERMATITIS VENENATA FROM MOSQUITOES.

MARY H., age twenty-four. Born in Ireland, a recent immigrant.

Three weeks after arrival in this country the patient went into domestic service in a neighboring suburban town, where mosquitoes abounded. After being bitten on the exposed portions of the skin, these parts swelled and became so inflamed that relief was sought at the hospital.

The patient was a healthy, well-developed Irish girl. On the parts generally that had been bitten the skin was highly erythematous, swollen and covered with numerous large wheals, many of which were distinctly vesicular and bullous. Swelling of the eyelids was sufficiently intense to close the eyes. There was slight fever and malaise.

Under local applications of oxide of zinc and lime water, and free saline catharsis, the process subsided, and in a week's time the patient was discharged well.

Arrived recently from a portion of Europe where mosquitoes are not indigenous, and therefore unaccustomed to their bites, the patient experienced the effect of an entirely new poison in her skin, which, combined with the contributing influences of a steerage passage across the Atlantic, explained the unusual severity of the cutaneous reaction.

[J. C. White (Journ. Cutaneous Dis., Oct., 1890, Dermat. venenata, 1887) some years ago called attention to this variety of dermatosis, and cited numerous instances in his experience of the extraordinary effect of mosquitoes and certain vegetable poisons on the skins of immigrants who, before arriving in this country, had never been exposed to these irritants.]

ERYTHEMA MULTIFORME PSORIASIS.

Margaret W., age twenty, laundress. Born in Ireland. Family history unimportant. Previous health of patient always good.

The present illness began three days ago, when the ankles swelled and became painful in the evening. The following morning both legs were swollen, reddened and painful. The lesions on the face were noticed two days ago.

On entrance to the ward both legs were edematous and pitted on pressure. Over the surface of the legs generally, and most numerous anteriorly, were red, cent to half dollar sized, deeply seated nodules, decidedly painful on pressure. The backs of the hands presented a few, bright red, large bean-sized papules with several peripherally-situated vesicles. The bridge of the nose also showed two papulo-vesicular lesions.

During the first five days in the hospital there were evening exacerbations of temperature, subsiding to normal on the sixth day. The general physical examination of the patient was quite negative.

In addition to the acute erythematous affection, there was a generalized, sparsely disseminated papulo-squamous psoriasis of six months' duration.

RAYNAUD'S DISEASE.

Tilly H., age forty-four. Born in Austria. General family and personal history unimportant.

The present illness began four years ago, when the fingers of both hands began gradually to get blue and cold, especially in winter, and to be accompanied by a burning pain. The feet have never been affected. The ears seem sensitive at times.

Both hands felt decidedly cool, getting colder towards the ends of the fingers. The skin of the fingers was waxy, pinkish-white in hue, with a marked atrophic appearance. The finger-nails were either entirely atrophied or partially so, with thickening and transverse striation. At the tip of the second finger of the left hand was an open, superficial, sluggish ulceration. The radial pulse was regular, small and of poor tension. (78 m Hg.) Nerve reactions were normal. Under tonic treatment the general condition of the patient improved considerably and the local affection somewhat.

PEMPHIGUS FOLIACEUS.

S. M., infant, female, ten days old. Born in Dorchester.

Family history.— Infant's mother has two older children, both of whom have always been well. No history of miscarriages in the mother, nor of venereal nor cutaneous disease in either parent.

The physician who attended the birth of the infant reported that it was born healthy on Aug. 14, 1904.

The affection for which the infant was brought to the hospital began on the ninth day of life, appearing first on the left arm as vesicles and rapidly becoming a generalized bullous eruption. The bullæ had flaccid walls which were easily ruptured, either spontaneously or from contact with clothing.

On entrance to the hospital on Aug. 25, the following description of the case was recorded:

"Female infant, well developed and nourished. The hairy portion of the scalp is exempt. The epidermis of the face and neck is macerated and exfoliating in large sodden shreds, leaving beneath a denuded surface of a deep, brawny, red hue. The eyelids are intensely swollen, closing the eyes, and from between the lids there exudes a little sero-purulent fluid. Almost the entire surface of the arms is denuded of epidermis by maceration. The skin of the hands is intact, but even there it appears sodden. A large portion of the trunk and legs is similarly affected, presenting large plaques of macerated, exfoliating epidermis. The feet are relatively unaffected, like the hands.

When the infant was first seen, the possibility of the condition having resulted from a burn by immersion in hot water was considered. It could not be conceived, however, how immersion could have taken place and yet leave the scalp, hands and feet exempt; furthermore, the affection was said to have begun with an eruption of vesicles on one arm.

Aug. 26, the day after entrance, the appearance of the skin was an aggravated picture of the preceding day. Added to the deep-red color of skin there was a marked cyanotic hue. The general condition was decidedly feebler. Death occurred on Aug. 27.

The treatment of the case consisted in the application of carron oil externally and in the use of brandy and salt solution internally. Unfortunately permission for autopsy was not granted.

The etiology of this rare affection is yet obscure. It is usually classed among the rather broad group of pemphigoid affections, occupying an intermediate position between the bullous type and pemphigus vegetans. As yet, pathological examination of the skin has shown little more than an edema between the epidermis and corium.

LYMPHANGIOMA CIRCUMSCRIPTUM.

S. H., female, fifty-one years old. Born in England and resides in Boston. Family history unimportant in relation to the present affection.

The patient's general health had always been good until four years ago, when she was operated upon for a supposed abdominal cancer. At the operation a tumor mass was found infiltrating the greater peritoneal cavity; the tumor was considered inoperable and the patient was subsequently told that she had about a year, more or less, to live.

On Christmas Day, 1902, the patient was taken with a severe abdominal pain, radiating across the umbilical region, which subsided in a few hours after application of hot water bottles. The following day an eruption was noticed over the region where the heat had been applied, and was thought to have been caused by it. At first appearing as a diffuse, erythematous, palm-sized plaque about the umbilicus, the area rapidly doubled in size, and became covered with numerous vesicles.

During the following year and a half, there was no apparent change in the appearance of the eruption.

Suddenly, one day, the skin of the abdomen was found to be wet, the moisture exuding from one of the vesicles on the affected region. The fluid at first exuded intermittently, but soon the flow became constant and always from the same point. Gradually increasing in amount, the fluid some days soaked three to four bath towels. At night in the recumbent position the flow practically ceased. The general condition of the patient during all this time was excellent.

On the entrance of the patient to the Massachusetts General Hospital in July, 1904, the following notes were recorded: "The abdomen is moderately prominent. In the left lumbar region is dullness, not changed by position, beginning in the umbilical region and extending to the extreme left. On palpation a firm mass is felt in the left lumbar region, not well defined, but corresponds approximately to the area of dullness. The skin of the abdomen is thrown into folds and shows prominent *liniæ albæ*. There is general pigmentation of the skin in this region. About the umbilical region is an area twice the size of the palm, of a violaceous-red hue, and thickly covered with discrete and confluent vesicles, the latter having flaccid walls and their contents easily removed by pressure. From a large vesicle at the right border, a serous fluid continually exudes, the orifice of exit is very minute and cannot be detected with the smallest filiform probe.

The clinical diagnosis of lymphangioma was made, which was corroborated by a biopsy removal for pathological examination.

It seems probable that the lymphangiomatous proliferation, starting from the mesenteric lymphatics, simulated a malignant tumor, which, four years ago when the abdomen was opened, was thought to be cancerous. The fact that the patient remained in excellent health in spite of the increase of the growth and the lapse of time disproves any supposition of malignancy.

During the first few weeks in the hospital the minute, oozing point was frequently cauterized, however, with only temporary cessation of the flow of lymph. Finally more extensive cauterization with the paquin cautery was essayed, and the area was deeply seared with eight to ten punctures half an inch in depth. This finally successfully stopped the exudation. A relapse of the condition is, however, probably to be expected.

TROPHIC ULCER.

Julia C., aged, sixty-three. Irish. Family and past history unimportant.

The cutaneous affection began three years ago at the center of the left palm, as a bean-size nodule which was very tender on pressure. The nodule increased slowly in size for a year until it attained the size of a cent. Up to this time the surface remained unbroken, but continued to be very painful. The lesion was then cauterized in Lynn, and from thenceforth became an ulcer, which progressively enlarged peripherally. When the ulceration had lasted two months and had reached the size of a dollar, a skin graft was attempted, but without success. For the following six months various ointments and powders were used, all without success. Finally the x-rays were tried and were applied five minutes every day for twenty days. The hand, however, grew steadily worse. Later another skin graft was attempted, again without success.

On entrance to the hospital the hand presented a circumscribed area one and a half inches in diameter, ulcerative and crusting. The fingers were smooth and shiny, and were contracted midway between extension and flexion. Sensation was absent in the first and second phalanges of the fourth finger, diminished in the first phalanx of the second finger. On removal of the crust a purulent surface was exposed. Albumin

and sugar were absent in the urine. In five weeks from the time of entrance to the hospital the patient was discharged with the ulcer entirely healed. External medication consisted in the use of a stimulating lotion of tartrate of iron and potassium, nosophen powder and a salve of boracic and salicylic acids. Internally iron was given in the form of Bland's pills.

Medical Progress.

REPORT ON PEDIATRICS.

BY THOMAS MORGAN ROTCH, M.D.,

AND

JOHN LOVETT MORSE, M.D.

(Concluded from No. 25, p. 731.)

SUGGESTIONS CONCERNING THE ACTIONS OF ALKALIES AND THEIR INDICATIONS IN INFANT FEEDING.³

ALKALIES have been added to cows' milk in infant feeding for a long time under the impression that they acted as antacids and, by neutralizing the acidity of cows' milk, made it conform to the supposed alkalinity of breast milk. Breast milk, however, has been proved to be faintly acid, hence this reason for using alkalies no longer exists. Nevertheless, as alkalies have given good results clinically, it is important to determine the explanation of their successful use. Most of the authorities have stated that one part of lime-water to 16 or 20 parts of cows' milk was sufficient to make its reaction correspond to that of breast milk. Others have stated that 20 grs. of bicarbonate of soda is the equivalent of 1 oz. of lime-water for this purpose. They have, however, advised the use of the same amount of limewater or bicarbonate of soda in all sorts of mixtures of milk and water without regard to the amount of milk. That is to say, while the alkalinity of the food is the same in each mixture the amount of alkali for each ounce of milk in the mixture varies with each mixture. Practice has, therefore, been out of joint with the theory and, as just stated, the theory was founded on wrong premises.

Cows' milk, while it has only a slight initial acidity when drawn from the cow, later develops a secondary acidity due to lactic acid produced by certain bacteria. This increasing acidity, unless checked, may become a serious factor and, when the milk is ingested, lead to the formation of more tough curds than can be digested by the pepsin secreted by the stomach, while these same curds are not in a form suited for intestinal digestion. The addition of an alkali may not only neutralize lactic acid as fast as it is produced, but will also cause the resolution of flocculi of the lactates of casein already formed. If it were possible to add just the exact amount of alkali to neutralize the lactic acid the effect of the alkali would cease at this point. In practice, however, it either neutralizes but a part of the acid if it has been added in smaller amount, or if added in excess renders the food alkaline when it enters

the stomach. This alkalinity of the food has a definite influence upon the stomach digestion, for the rennet ferment will not act upon casein in the presence of alkali, and the normal formation of paracasein clot is prevented until the alkali is neutralized or removed, and, moreover, an excess of alkali will neutralize the hydrochloric acid afterwards secreted by the stomach until the alkali is exhausted. As pepsin cannot act except in an acid medium, a sufficient excess of alkali or antacid would entirely prevent stomach digestion and the milk would pass unchanged into the intestine. In this manner the entire labor of digestion would be placed upon the intestine. This is probably not infrequently the case when the addition of alkali is large.

Milk diluted with plain water containing no alkali is promptly clotted in the stomach by the rennet ferment and the clot is transformed into tougher masses when acid is secreted. A moderate amount of alkali which neutralizes both the hydrochloric and other acids already present in the stomach holds in check for a time the action of the rennet ferment, prevents the immediate clotting of all the milk by the rennet and allows time while enough acid is being secreted to overcome the alkali for the escape of more or less unchanged alkaline milk into the intestine; thus, when the acid reaction is again finally established in the stomach only a portion of the milk, depending on the length of time which has elapsed, remains in the stomach to form curds and to be digested by the gastric juice. This use of a moderate amount of alkali has the advantage of dividing the digestion of the milk between the stomach and the intestine and may reduce the amount of milk to be digested by the stomach to the capacity of the digestion.

The kind of alkali employed, as well as the amount, is of importance. Limewater and bicarbonate of soda differ both in their properties as antacids and in the influence which they produce upon milk and its curdling. Limewater swells the mucoid proteid of milk, thickening the milk and making a visible change in its consistency. Limewater is a very weak antacid, 1 oz. being neutralized by $\frac{3}{4}$ gr. of hydrochloric acid. Bicarbonate of soda does not swell the mucoid proteid of the milk, but if milk to which bicarbonate of soda has been added without subsequent heating is ingested and there meets with acid, carbonic acid gas will be liberated during digestion, and if curds are formed they will be porous from the presence of minute bubbles of the gas. If food to which enough bicarbonate of soda has been added to render it slightly alkaline to litmus is heated, carbonic acid gas is liberated and carbonate of soda, washing soda, formed, which increases the alkalinity. Pasteurizing or sterilizing, therefore, increases the degree of active alkalinity and lessens the possibility of a more porous curd. The amount of bicarbonate of soda recommended in most textbooks, that is, 1 to 2 grs. to the ounce, is relatively greater than the amount of limewater usually prescribed in its neutralizing power upon acids, 20 grs. of

³ Southworth: Archives of Pediatrics, 1905, Vol. xxii, p. 131.