SMITH (A.J.)

REPORTS OF SEVERAL CASES OF ANGIO-NEUROTIC ŒDEMA.

BY

ALLEN J. SMITH, M.D.,

ASSISTANT DEMONSTRATOR OF PATHOLOGY IN THE UNIVERSITY OF PENNA.

FROM

THE MEDICAL NEWS,

March 23, 1889.

[Reprinted from THE MEDICAL NEWS, March 23, 1889.]

REPORTS OF SEVERAL CASES OF ANGIO-NEUROTIC ŒDEMA.[1]

BY ALLEN J. SMITH, M.D.,
ASSISTANT DEMONSTRATOR OF PATHOLOGY IN THE UNIVERSITY OF PENNA.

THE literature of this peculiar condition is singularly meagre, and in searching the journals and works within my reach I have been unable to find any other references than those detailed in the paper presented to this Society some months ago by Dr. William Osler, upon an hereditary form of the disease. Presenting much the general characteristics of an extensive form of urticaria, and in its general aspect resembling this affection in most particulars, it has, by a number of writers, been referred to similar, but more extended, anatomical changes of structure in the papillary layer of the skin, with some neurotic etiological factor at the basis. This view, accepted by most dermatologists in the case of the urticarial wheals, includes an inflammatory condition. There is supposed to occur first a hyperæmia of the capillary vessels of the papilla, followed by the escape of a proportion of the white blood-corpuscles and serum

[1] Read before the Philadelphia Neurological Society, January 29, 1889.

from the vascular lumena, and grouping of these elements about the vessel walls, with gradual occlusion. In this manner the papilla is enlarged enormously, the blood is excluded from its structure; and macroscopically it shows itself as a white, bloodless papule, about whose base is a zone of hyperæmia, and covered by an epidermis shining and stretched from pressure from beneath. Section of the papular eruption in rabbits caused by the irritation of nettles, according to Neumann, confirms this view, and shows, moreover, a similar condition of the lymphatic tracts, the lymph corpuscles banked about the narrowed vessel, and aiding in the general swelling of the part. A number of such papillary swellings coalesce to the formation of a wheal, and the general mechanism is extended to explain the more widely swollen areas in this condition of acute, circumscribed œdema.

That such a condition, at times, does obtain is quite probable. The following case was seen some months ago in the southwestern district of the Philadelphia Dispensary:

A young woman asked relief for a recurring œdema of her face about the nose and eyes. Five years previously she had had a severe facial erysipelas, and since then each year at some time during the cold months, and each time preceded or associated with an acute nasal catarrhal inflammation, the tissues about the nose and eyes became swollen into deformity. The attack in which I saw her was the fourth. There was not the usual pitting upon pressure, the swelling being limited to the dermal structure and invading the subcutaneous cellular tissue; there was no pain, and no discomfort save the

marked itching at times, which was readily allayed by sedative applications, as carbolized solutions. The skin was tense and shining, and the whole swollen area of the ordinary waxy hue of œdema. These attacks lasted for several days each, and disappeared as rapidly as they appeared. The nasal catarrh, however, was not especially influenced by the disappearance of the œdema, and each time continued for some days or weeks longer. No other parts of the body were in any way affected, and had not been in any of the attacks, and the disturbance was distinctly localized to the parts described.

In such a case, in which little or no neurotic element can be called in as an etiological factor, the whole process is explained by the ready extension of the nasal and conjunctival trouble to the adjacent dermal structures, whose power of resistance had suffered distinct shock, and probable deterioration, in the erysipelatous attack years before; except possibly the rapid and complete disappearance of the results of the process before the cessation of the inflammation from the primary site in the nasal mucous membrane. This might, however, be accounted for by a continuation of the catarrh for a longer time than the dermal symptoms because of the irritation from the passage of air and irritants over the inflamed membrane, the dermal being both of a slighter character and being more protected from agencies which would cause its continuation.

Another instance more closely connected with the subject in hand, perhaps, occurred in the case of a woman about the period of the menopause, with marked neurotic tendencies, during my service as a district physician in the above-named dispensary.

This woman first called medical aid for the relief of symptoms of muscular rheumatism, which yielded readily to salicylates. Following the administration of this drug some days, an attack of gastritis set in, and for a number of weeks the ingestion of any heavy food, or of fish, or certain vegetables, was invariably followed by a widespread eruption of urticaria, lasting for a few hours and then disappearing without further care. In several of these attacks there was associated facial swelling, especially marked about the eyes and cheeks, of transient duration, and only noticed because of its disfigurement and the persistent itching sensations attending both this uniform swelling and the more discrete papular and wheal-like eruption over the rest of the body. The swelling here was not so marked as in the first case, and presented to the touch a hard, firm sensation directly in the dermal tissues and not beneath. The surface here was not so completely bloodless as in the ordinary urticarial eruptions, but presented a somewhat mottled appearance—suggesting the probable method of origin from coalescence of a number of the larger wheals. These swellings ordinarily lasted a less time than the wheals elsewhere on the patient's person, and after leaving there remained for a time a slight burning sensation, and the parts became flushed. There was no renal disease noted from the urinary examination; and the only other symptom noted at the time was the passage of bright blood occasionally from the intestines. The origin of this was probably hemorrhoidal, but on account of the refusal of the woman no examination could be made.

To this same class in which are associated inflammatory conditions, might, with propriety, be relegated the case of a young man, a druggist, who in-

cidentally mentioned the fact that at the outbreak of every cold—especially nasal—his under lip and the lobe of the left ear invariably became swollen, hot, and uncomfortable—lasting for a few hours or a day and then disappearing. The swelling is specially marked in the lip on the same side as the ear, and the relation between these two foci of œdema and the catarrhal inflammation probably depends to some extent upon the distribution of branches of the facial and auricular nerves, or the fifth nerve.

Whether this condition of an extension of some inflammatory influence—perhaps latent to outward observation—is invariably present in cases of acute circumscribed œdema is questionable; and unless, as suggested by this last case, this inflammatory influence be usually transferred through nervous activity, or a secondary focus of hyperæmia with resultant œdema be produced by nervous reflex, another condition must be invoked for further explanation. The fact that in the ordinary cases of this affection, whether marked by hereditary taint or not, the symptoms almost always follow the ingestion of some substance of indigestible nature would suggest the first idea, although it would not preclude the possibility of some other result than an inflammatory one from the nervous reflex from the focus of irritation.

The following case strongly suggests the possibility of this condition, consisting of a non-inflammatory origin and course throughout, depending upon the association of an hereditary tendency and general malnutrition as strongly predisposing causes

and the occurrence of some unobserved exciting agency—in one instance ascribed by the patient to a psychical or moral agency.

The patient at the time of the first attack was about sixteen or eighteen years of age, in poor general health, anæmic and tending toward chlorosis. The attacks recurred without apparent cause or warning several times a year until she was twenty-two years old, a short while before marriage. The swelling was usually confined to the face, but on several occasions one or both arms partook in the process. Preceding the swelling there was a marked itching from urticaria, which, however, always disappeared before the œdema reached its maximum. There were no painful symptoms manifest, the only discomfort arising from the feeling of fulness and tensity of the parts. The duration of the attacks varied from a few hours to a day. In no way could indiscretions in diet be associated causatively with the attack. At the time of the last attack she was placed in the hands of one of the physicians of the University, who recognized the influence of the underlying chlorotic dyscrasia, placed her upon a ferruginous treatment and a carefully systematized mode of life, following which there resulted an almost immediate general improvement and since which there has been no recurrence of the œdema.

Shortly after she married, and in the four years of her married life she has borne three children, the older two healthy and robust, the third more or less sickly; has had a miscarriage last January and is now pregnant a fifth time. Notwithstanding the notable drain upon her system from prolific childbirth in the history she has given, her health has steadily improved. At present she is a well-nourished and

well-developed woman, of slight stature, medium clear complexion, nervous temperament and apparently strong constitution. The father of this woman, a small, compactly built man, also neurotic, in early middle life had been subject to the same peculiar affection, manifesting itself in a similar manner. No record of further hereditary taint could be obtained; and the children of my patient are entirely without symptoms of a like nature.

It is entirely improbable that sufficient inflammatory action should be aroused to give rise to such marked and general symptoms without undoubted evidence of its presence; and the apparently causeless nature of the malady, the absence of digestive symptoms, would suggest a central and wide-reaching influence in their production. As an explanation of these phenomena, the occurrence of another instance which I shall presently narrate, has suggested the possibility of the existence of an acute lymphangioma, depending upon disturbances of the lymphatic vasomotor nervous influences. The proof of such a theory I acknowledge I cannot offer, but the appearances of the following case seem to agree with the supposition, and it is not impossible that others of the cases may be accounted for by the hypothesis.

Miss M., aged twenty-five years, one day in the early part of last November, while walking in the street, felt a peculiar stinging sensation throughout the right side of her body, and before she could reach her home, some squares distant, began to swell uniformly over this part of her person. The evening before she had eaten raw chestnuts and had had celery at her dinner. She was born with a large

birth-mark over her entire right side; and this side has always been rather below the left in condition of nourishment, the limb and arm smaller and very slightly shorter, the mammary gland smaller, and the whole side more apt to become cold upon exposure or to feel fatigued upon exercise. The first attack occurred two years ago, and the one in which I found her was the third or fourth since then. The entire right side was swollen to marked disfigurement, the eye almost closed, and the mouth drawn because of the swelling to the affected side. The arm and limb were both markedly enlarged, and the whole surface hard and smooth, with no irregularities of swelling. The color was that which would be given by a thin coating of white powder over a dusky red. There was no heat in the swollen parts and no pitting upon pressure. There was no pain from the swelling, but during the attack several times she complained of slight colicky pains; the only sensation over the affected part was one of tenseness and fulness, with occasionally some itching. This condition lasted several days, and then gradually disappeared.

Examination of a bit of the fluid which came from pricking the swollen part, showed it to contain a large proportion of leucocytes, and the rest was clear serum; the urine during the attack presented no special peculiarities under the microscope or upon a routine chemical examination. The tongue appeared slightly swollen, but no unilateral anomaly could be detected in the coating or color. The case has no hereditary history, has always enjoyed fair health until the last few years, since when she has grown to be regarded as delicate. Within the last three years she has twice fainted—both times in church—and has shown a number of hysterical traits.

This last case would suggest, from the color of the affected portions and from the absence of heat, the probability of the presence of another factor than one of a simply intensified angioma of the affected side. The absence of pitting on pressure and the rapidity of disappearance would appear to preclude the idea of serous cellular effusion (of inflammatory origin) with subsequent resorption, and the general conformity of the swollen portions with the angiomatous area of the right side would suggest a possibility of a similar condition of the lymph-vessels, due perhaps to the same altered innervation. Such an hypothesis, too, could, without undue strain, be brought to bear on the case of hereditary tendency, in whom there was no irritant cause apparent whatever; and it might with equal propriety, too, be extended to the case of œdema of the lip and lobe of the ear.

Fully appreciating the weak points in this train of arguments I have outlined, and unable from evident reasons to verify or deny my position, I would suggest as the outcome of such a set of instances the two provisional classes of acute circumscribed œdema:

a. Inflammatory—depending upon actual inflammatory processes in the papillary layer of the skin.

b. Neurotic—depending rather upon an angiomatous condition of the lymph-vessels of the corium due to alteration in nervous supply. To this latter variety might be applied, for the purpose of clearer definition, the term acute neurotic lymphangioma.

In the actual matter of treatment, too, there may

a clearer line of separation be drawn between these two classes, the former depending largely for its alleviation upon local measures, the latter demanding general medication directed toward the removal of the systemic fault which is almost certainly present.