disease which directly caused the symptoms, but the chemical products the result of their action upon the tissues. This, he thought, opened out the interesting question, might not lactic acid, which had been said to play such an important rôle in the production of rheumatism, be the chief ptomaine of this disease? The well-known experiments of Dr. Richardson, and the observations by Sir Walter Foster of the development of rheumatism during the administration of lactic acid, suggested its being an important factor in the production of the disease. The manifestation of similar symptoms in other diseases might be accounted for by the ptomaines being of a similar nature. He had found that cultivations of bacteria found respectively in rheumatism, tonsillitis, erythema nodosum, and scarlatina produced lactic acid fermentation in sterilised milk.

In conclusion, Dr. Mantle stated that he hoped to give the results of further research into this interesting question at a future time. He felt, however, convinced that rheumatism was produced by the agency of a bacterium, which he thought in most cases entered the system through the lymphoid structure of the tonsil. The necessary pabulum being found, the organism multiplied, its morbid action was confined chiefly to the lymphatic system, the serous membranes being affected in preference to other structures. The fact of salicine—a potent germicide—being so successful in the treatment of the disease strengthened this theory.

NOTE ON SOME POINTS IN THE NATURAL HISTORY OF ACUTE RHEUMATISM.

By ARTHUR DOWNES, M.D.,

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In the admirable memorandum, and in the not less excellent card on acute rheumatism issued by the Collective Investigation Committee of this Association, I do not observe any reference to the question of heredity as a possible factor in the causation of this disease. It may be that the compilers were anxious to curtail the field of their inquiry, and in this they would be wise, for in every investigation of Nature we must be content to seek and to learn a little at a time, to crawl before we walk, to walk before we attempt to run. One is loth to criticise even the details of an enterprise endowed with such promise of success, and having such possibilities before it; yet the fear presents itself that some of the inquiry-cards are over-freighted by their load of questioning.

Still, in any systematic inquiry, it seems to me that the problem of heredity must of necessity be among the first for solution. Apart from its intrinsic importance to the community, to say nothing of its interest as a question of pure science, the influence of heredity constitutes one of the two great branches into which etiology divides. Its general tendency is opposed to that of the environment—the influence *des milieux* of the French—and I fail to see how we may scientifically gauge the effect of the one while we remain ignorant of the other.

The men who can throw most and the best light on this matter are the general practitioners, to whose abilities Dr. Stephen Mackenzie lately paid in these columns a well-merited tribute of acknowledgment, and whose opportunities for acquiring trustworthy knowledge of family tendencies to disease are well summed up by him.

I do not remember that the text-books give much information on heredity in regard to acute rheumatism; systematic writers, indeed, commonly contrast gout in this respect. From time to time, however, one meets, both in practice and in medical literature, with instances of marked family predisposition to rheumatic fever. I came across such an one while lately inquiring into a little epidemic of erysipelas.

S. P., aged 51, an agricultural labourer, was attacked by facial erysipelas early in August, followed shortly by acute rheumatism, from which he had previously suffered eleven years ago. F. P., brother of the above, aged 47, living in a cottage hard by, came in to lift his brother up in bed. On August 20th he, too, sickened with erysipelas, which in its turn was likewise followed, in about fourteen days, by acute rheumatism, with pericarditis, from which he died on October 1st. I did not inquire exhaustively into the family history, but I learned that two other brothers, W. P. and J. P., have had rheumatism of some kind; that last Easter, two young women, daughters of S. P. and F. P. respectively, had come home almost simultaneously from different situations ill with acute rheumatism, one of these being a second attack; that another daughter of S. P. had had it two years ago, and a daughter of F. P. had died of the same disease nine years back. Influences of locality appeared to me quite insufficient to explain this exceptional incidence on a particular family.

There is another point of interest in this history. Both in S. P. and F. P. an attack of erysipelas appeared to act as the exciting cause of the rheumatism supervening in individuals already specially predisposed to it. Trousseau (*Sydenham Society's Transactions*, iv, 442) describes a similar sequence, and compares erysipelas in this relation with scarlet fever. There is, indeed, a curious connection between a number of pathological states which group themselves around rheumatic fever, for the unravelling of which we look hopefully to collective investigation.

Urticaria, for example, is well-known as an occasional concomitant of acute rheumatism, and Hebra (*Sydenham Society*, i, 310) asserts that urticaria is more common when erysipelas is prevalent than at other times. The same author (*Ibid.*, p. 291) considers erythema nodosum to be allied to the erysipelatous diseases, and I once received (*apropos* of some note I had published) a communication from a practitioner in the Black Country, drawing my attention to a sequence which he believed he had observed between erythema nodosum and scarlatina; in fact, to use his own comparison, he regarded the former as certain a harbinger of the latter as the cuckoo is supposed to be of spring. I am bound to say that I have only once, during the eight years which have since gone by, observed a concomitance of these two diseases, but then erythema nodosum does not often come to my notice as a non-practising official.

This leads me to speak of another feature in the clinical relations of acute rheumatism. It is half a century since Rayer described the occurrence of a papular rash (*E. papulatum*) in this disease, and nearly as much since Bouilland and Schönlein respectively pointed out its relations to erythema nodosum, and to a form of purpura. The latter, indeed, under the names of purpura rheumatica (Reder), peliosis rheumatica (Schönlein), and rheumatocelas (Fuchs) has been described as an independent disease. I do not pretend to have studied the pathology of this affection, but in what I have personally observed of it, I have seen nothing but acute rheumatism *plus* certain cutaneous and other results of multiple thrombosis and embolism. This was Trousseau's view. Acute rheumatism, he argued, is the morbid state in which the blood contains the greatest proportion of fibrin, and that is not a condition predisposing to hæmorrhage. May it not be, then, that the petechiæ and ecchymoses which one meets with in acute rheumatism depend on numerous obliterations of veins and consequent extravasations of blood? (*loc. cit.*, iv, 448-9).

I believe that these irregular forms of acute rheumatism—at least so I regard them—are more common than is generally supposed, and I think that not seldom they are relegated to the vague and unsatisfactory category of "blood-poisoning." In one of my annual reports about three years ago, I gave a short description of six cases, one of which I saw myself, occurring in the practice of my friend, Mr. Arthur Goodchild. The chief features of these cases, as observed by him, were: 1. Articular rheumatism, with possibly cardiac complications; 2. Erythema nodosum; 3. An eruption, sometimes occurring in crops, papular, measles-like, or purpuric; 4. Orchitis in two; and 5. Albuminuria, intense and persistent, or, in two cases, intermittent. These symptoms were not necessarily all present in the same case. I have not been able to find any previous notice of the occurrence of orchitis or of albuminuria—both highly important observations, it seems to me. These cases were all males, and all young, some, indeed, small children. I mention this because the writer of the article on Peliosis Rheumatica in Hebra (*loc. cit.*, iv, 422-3) says that it had never been seen in children. On the other hand, an article by Aug. Schmitt, "On Peliosis Rheumatica of Children," is referred to in *Syd. Soc. Year-Book*, 1860, p. 403. Unless this article happens to resemble the famous chapter on "Snakes in Iceland," it should, with Mr. Goodchild's experience and my own, modify Hebra's assertion. A similar train of irregular symptoms accompanying acute rheumatism was described by Trousseau under the misleading name of erythema papulatum.

TINCTURE OF SIEGESBECKIA ORIENTALIS IN RINGWORM.

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Of the drugs now generally prescribed in the treatment of tinea in its several varieties some are exhibited in the form of ointments, and ointments are always more or less disagreeable to use; others free from greasy annoyances, give the patient more or less pain in the application. The preparation I have been using for some time past is devoid of both these drawbacks, and at the same time is speedy and reliable means of curing the disease.