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.,

Medical Officer of Health to the Chelmsford Combined Districts.

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.

By J. HUTCHISON, M.D.,

Physician to Anderson's College Dispensary, Glasgow.

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.

Siegesbeckia orientalis is a shrub, the green parts of which have quite a reputation in the Mauritius. For internal administration a syrup is prepared by pounding the green plant, adding sugar, and straining. This syrup is considered a powerful alterative, and is given in syphilis, gout, scurvy, scrofula, etc. For external use a poultice is made of the bruised leaves, and applied to gangrenous and sloughing sores with marked healing effect. By the enterprise of Messrs. Thos. Christy and Co., London, the plant has been introduced into England and placed within the reach of medical men here. From them I received a supply of the tincture, and have been prescribing it with varying degrees of success in different diseases. It is, however, to its value in treating the several varieties of tinea that I now wish to draw attention.

I have used it in fifteen cases of ringworm; of these, eight were cases of tinea circinata, four of tinea sycosis, two of tinea tonsurans, and one of tinea versicolor. The site of the eight cases of tinea circinata was in six of them upon the neck, and in two upon the calf of the leg. None of the patients called upon me till the disease was well developed, when the red, raised, circular, bounding edge, and the pale central area with its branny desquamation, left little doubt of the diagnosis. The four patients who were afflicted with tinea sycosis all blamed a "foul shave" for their ailment. In all of them the disease was upon the chin, and presented the characteristic fig-like appearance. The two cases of tinea tonsurans showed the roundness of the diseased patches, the scaly eruption, and the brittleness of the hairs peculiar to that form of the trouble. The one case of tinea versicolor was also typical.

My prescription in all of them was the same, namely, equal parts of tincture of *siegesbeckia* and glycerine, and this I ordered to be well rubbed into the affected area night and morning. The drug appears to act both as a stimulant and a parasiticide, and the method of cure was for the diseased patch to become broken up into a number of smaller patches, with sound skin intervening. These smaller patches became again broken up till they disappeared altogether, and in their place was left a red blush, as if the part had been struck a smart tap with a cane. This redness, however, only remained for a day or two. The two cases of tinea tonsurans were the most stubborn to give way, but even in their cases more frequent applications, and continuing the treatment over a longer period, brought about the result desired, and that, too, without resorting to epilation.

SURGICAL MEMORANDA.

STIFFNESS OF THE GREAT TOE IN ADOLESCENTS.

WHEN, in the JOURNAL of April 2nd, Mr. May asked for information regarding this condition, I wrote to him direct, stating that he should support the instep, as the condition was in almost every case dependent on some giving way of the arch of the foot.

I was recently consulted by a student of medicine who complained of this condition. It had troubled him for several years, and the symptoms were as already described by several writers. All sorts of remedies had been applied to the joint without any good effect. The deformity could be noticed even with the boot on, as one writer observes. When I suggested a slight giving way of the arch, he naturally did not feel flattered, and stoutly denied that he had any flat foot; but, on careful examination and comparison, he was obliged to admit that the left arch was rather lower than the right, especially towards its anterior part. I then demonstrated that a similar condition could be produced on his sound foot by firmly pressing the ball of the great toe upwards.

When standing on one foot, so that it has double weight to bear, if the weight be thrown slightly forwards on to the ball of the great toe, it will be found impossible to hyper-extend the toe even in a foot perfectly normal. The position seems to be that the tarso-metatarsal joint is extended; the metatarsal bone and phalanges then occupy the same straight line; and the extensor proprius hallucis muscle is practically powerless in its attempts to hyper-extend the toe. The fibrous slips which connect the tendon of the extensor proprius hallucis (or its sheath) to the head of the first metatarsal bone and to the phalanx of the great toe (Duchenne) cannot be brought into action.

Considerable error arises from the idea that the arch of the foot can only give way at a particular point; and the truth seems to be that it may give way almost anywhere, just as curvature of the spine may commence and be most marked at almost any intervertebral articulation. The term flat-foot ought, therefore, to be used in a wide sense; and it has been proved by experiment that the exclusive importance generally

ascribed to the inferior calcaneo-scaphoid ligament and tibiales muscles in supporting the arch is a mistake. This point has been urged by Dr. Symington in the *Journal of Anatomy and Physiology*, vol. xix, page 83. It is also supported by Professor Humphry in a later number (October, 1886). The condition, then, for which the names "hallux flexus" and "hallux rigidus" have been proposed is merely a modification of flat-foot, and these names would have the disadvantage of directing attention away from the point which really required treatment—namely, the instep.

But, further, the condition has been already described under the heading of "flat-foot with arthritic symptoms" by Mr. Golding-Bird (*Guy's Hospital Reports*, vol. xli, page 451). In referring to the complaint, he states: "It is usually mistaken for gout, and the patient is treated, accordingly, ineffectually. Some cases of flat-foot complain of pain hardly, if at all, in the usual place, but in the ball of the great toe." The straight and rigid position of the great toe is also described.

Professor Humphry has also described the bony outgrowths "similar to those which are common in chronic rheumatic arthritis." He states that they are "caused, no doubt, by the undue pressure to which the upper parts of the articular surfaces are subjected in consequence of the preternaturally extended condition of the several joints." (*Journal of Anatomy and Physiology*, October, 1886.)

W. SCOTT LANG, M.D., M.R.C.S., F.R.C.S.E.,
Demonstrator of Anatomy, School of Medicine, Edinburgh.

MR. MARSH'S suggestion, connecting this affection with puberty, (*JOURNAL*, May 28th, p. 1157) reminds me of the following case.

A boy of about 12 years became subject to attacks of pain and great tenderness of the first left metatarso-phalangeal joint, with partial stiffness. After a year or two the attacks became less frequent and severe, being noticeably worse in damp weather and on exercise; and they have since almost entirely left him. The patient is now 34. The proximal end of the first phalanx is much enlarged, causing the boot-deformity described by Mr. Marsh; and the joint cannot be extended beyond a straight line, whilst that of the right foot he can extend 60° beyond the straight line. There is also some tenderness and "cracking" crepitus on movement in the inter-phalangeal joint. The foot is not flat; nor is there history of tight boots or of excessive walking, nor of gout or rheumatism, except doubtfully of gout in the mother's family. There is, however, one fact of interest. A year or two before the toe-affection began, patient for one or two years practised masturbation, but quite ceased before puberty came on at the age of 14. It is curious that the boy himself ascribed his toe-pains to the habit named. Is it possible that the unhealthy activity of the sexual centres thus early may have had an influence in the causation? Other joint-lesions are often now connected with central nervous influence.

R. HINGSTON FOX, M.D.

Finsbury Circus.

UMBILICAL HERNIA: RUPTURE OF THE SAC: OBSTRUCTION OF THE BOWELS: GREAT FÆCAL ACCUMULATION.

I SUBMIT the following case for publication, as it is one of the many cases a country practitioner has to face without any previous warning, far away from home and from the aid of any consultant or even trained nurse.

On the morning of December 31st, in passing through an outlying village, I was asked to see H. D., "who was very ill and sick." I found a very corpulent woman, aged 55, in a state of partial collapse, with stercoraceous vomiting, the cause an immense obstructed umbilical hernia of eight or nine days' standing. The skin over the mass of extruded material presented a dark, uneven, nodulated, and hard surface, but was warm. The tumour measured horizontally 12 inches, vertically 8 inches, and protruded four or five from the abdomen.

The hernia, in a very much smaller condition, had existed for twelve years. Nine days previously, after violent coughing, H. D. had felt something give way, and the tumour at once began to assume its larger dimensions. On examination, I concluded that the hernial sac had been ruptured, and the intestines escaped into the adjacent subcutaneous tissue.

With much difficulty I discovered the umbilical orifice, dilated it with my finger, and in three hours managed to pass back the bowels first through the rent in the old thickened sac, and then through the stricture into the abdomen. Stercoraceous vomiting continued all the time. The omental protrusion was irreducible.

As soon as the hernia was returned and a bandage with a pad ap-