

recently, and it is too soon to form any conclusion as to ultimate results. The case is cited merely to permit introduction of a temperature chart showing marked febrile reaction to a dose of one one-hundred-thousandth milligram T. R. *per os*. This was given in error—fortunately without permanent damage. The patient is now afebrile, and not only has the loss of weight, which was rapid prior to coming under treatment, been checked, but a gain of six pounds in five weeks was made. An active cavity in the left upper lobe is becoming quiescent—almost dry. All symptoms have been favorably modified. This improvement is not attributable solely to tubercle bacilli residue, since rest in the open air, appropriate diet, the administration of ichthyol in doses of 5 to 10 minims (encapsulated), and mild blistering over the region of cavitation have done their part. The toxic effectiveness of the oral method of administration of T. R. is, however, strikingly demonstrated, and the lack of permanent ill result is to be noted.

It may be said, in conclusion, that Cases I and II illustrate fairly well the two groups of cases in which tuberculin may best be used by the general practitioner—always, however, with due care and caution. Cases III and IV illustrate a class of cases in which special experience, skilled nursing and favorable environment are necessary. To multiply instances would add nothing to the force of the illustrations, except perhaps to bring out some additional differences of detail in symptoms, progress and treatment, and thus emphasize the necessity for strict individualization in the management of each patient.

ECZEMATOID RINGWORM, PARTICULARLY OF THE HANDS AND FEET.

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A LITTLE more than half a century ago Hebra described, with his usual astonishing accuracy and clearness, a peculiar form of dermatitis occurring on the inner surface of the upper thigh and on the scrotum, extending occasionally thence up over the pubic region and backward between the buttocks. This dermatitis was accompanied by more or less severe itching, by scaling, and in the severer forms by oozing and some crusting. It presented many of the symptoms of eczema, and he regarded it as a special form of this affection, giving to it, on account of the usually sharply defined border presented by the patches, the name *eczema marginatum*. A few years later Köbner found mycelial threads in the scales taken

from patches of *eczema marginatum*, a discovery confirmed later by Piek and Kuposi, which established the parasitic nature of the disease, and removed it permanently from the category of *eczema*.

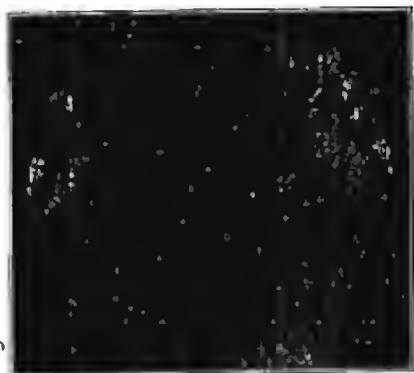
With this *eczema*-like form of ringworm the profession has long been more or less familiar. Notwithstanding its superficial resemblance to *eczema* in many of its symptoms, such as marked inflammation of the skin, accompanied by severe and prolonged itching, desquamation, oozing, and crusting, other features, such as the sharp circumscription of the patches, the occasional partial or complete spontaneous involution of the central portion make it evident, even to those with limited experience with cutaneous disease, that it is not a true *eczema* although resembling it.

Within a few years, indeed so late as 1910, Sabouraud called attention to the frequent occurrence of *eczematoid* inflammation on the hands and feet, more particularly the fingers and toes, due to the same fungus which causes the *eczema marginatum* of Hebra, and which resembles vesicular and pustular *eczema* of these regions so closely as to be practically indistinguishable from them without the aid of the microscope. It is to this parasitic *eczema*, for it is even more an *eczema*, so far as its clinical features are concerned, than *eczema marginatum*, that I especially desire to call attention, more particularly since the profession, with the exception of those specially concerned with cutaneous diseases, is as yet quite unaware of its existence, and failing to recognize its parasitic nature fail completely in its treatment.

Within the past few years four cases of *eczematoid* ringworm have come under my observation in which the presence of a parasitic fungus was demonstrated without difficulty, and one other case, at present under observation, in which the remarkably prompt disappearance of the disease after the employment of parasiticide remedies left but little doubt of its parasitic nature, although the microscopic demonstration of fungus was not satisfactory.

The first case, which is related from memory, the notes having been lost, occurred in a youth, aged seventeen years, who was sent to me by his father, a physician, for advice concerning an inflammation of the skin occupying the outer side of the left leg, just above the shoe-top. The inflamed area was about the size of the palm, quite ill-defined at its borders, slightly scaly, and accompanied by a moderate amount of itching. The duration of the patch was somewhat indefinite, but it had lasted a month or two. Microscopic examination of scales taken from the inflamed area revealed numerous mycelial threads; and under the use of a parasiticide ointment the disease soon disappeared. It is worth noting that this youth had had formerly an extensive ringworm of the scalp which had persisted in spite of treatment (it was before the discovery of the efficiency of the roentgen rays in this obstinate malady) until he was fifteen or sixteen years of age.

Mrs. S., a woman of wealth and leisure, aged about fifty years, was referred to me by her physician for the treatment of an obstinate affection of the toes of both feet. The disease, which occupied the plantar surface, consisted of an unusual dryness, with slight fissuring, scaling, and some itching. It had lasted a number of years, and although trivial in appearance, had given the patient great annoyance. It had been regarded as an eczema by the many physicians she had consulted; it had been treated by all manner of salves and washes without material improvement, and a course of roentgen-ray treatment had been equally ineffective. The disease resembled a mild squamous eczema, but microscopic examination of scrapings made from the affected surface revealed fragments of mycelium, the scantiness of the fungus elements being due without doubt to the frequent cleansing of the parts which the patient insisted upon. Under the use of parasiticide ointments, especially one containing salicylic and benzoic acids, to which reference will be made again, improvement began at once, and a complete cure after a time followed. This case is specially interesting not only because of its long duration, but because of the failure of a considerable number of physicians, one of them at least a trained dermatologist, to recognize the parasitic nature of the affection.



Ringworm of the toes resembling intertriginous eczema. A, slightly reddened and denuded area. Case III.

Mr. L., a man, aged twenty-four years, a law student, who came to the Skin Dispensary of the University Hospital in March of this year, had suffered for three or four months from an affection of the toes of both feet characterized by redness,

scaling, and fissuring in the flexures and between the toes, accompanied by moderate itching. The disease was slowly spreading backward upon the soles, and a new focus was just beginning some distance away from the original site of the eruption, as a pea-sized red patch with an elevated dry epidermic border. It had first appeared while the patient was in Panama, had continued without interruption up to the time of his visit to the dispensary, and resembled closely an intertriginous eczema, except that the posterior border of the patches where they extended upon the sole were much more sharply defined than is usual in that disease. Microscopic examination of scales from the toes showed an abundance of mycelial threads of unusual length; and treatment by a parasiticide ointment was promptly followed by recovery.

(Since the above was written this patient has returned with a reinfection, probably the result of wearing an old pair of straw bath slippers worn when he had the disease before. After remaining well for four or five months a red and scaling patch appeared in the centre of the anterior part of the right sole, which slowly enlarged until at present it is the size of a silver quarter, and to the outer side of this patch is a smaller oblong one presenting the same features. The under surface of the third toe of the left foot is likewise slightly red and scaly. The epidermophyton was found in scales taken from the larger patch on the right sole.)

In May of this year, Mr. T., a youth, about seventeen years of age, a student in a school for boys in the suburbs of Philadelphia, was sent to me for advice concerning a chronic inflammation of the sides and palmar surface of the right index and middle fingers with a portion of the palm adjacent. It resembled a mild scaly eczema, for which it had been mistaken by his former medical adviser, had lasted for six months, and had been uninfluenced by treatment. An abundance of mycelia was readily demonstrated in scrapings from the diseased area; and recovery took place within an unusually brief time under the use of the salicylic and benzoic acid ointment already referred to. The patient when told that his disease was a variety of ringworm, stated that he had had a ringworm of the axilla and thighs the previous summer.

From the time of tinea until a very recent period the so-called eczema marginatum was universally regarded as simply an unusually inflammatory form of ringworm due to the same organism which causes the ordinary forms, the greater degree of inflammation being the result of the heat and moisture of the regions affected which greatly favor the growth of the fungus, and the friction to which the parts are subjected. Tinea, however, had early made the observation that "when eczema marginatum attacks hairy parts . . . no alteration is produced in the state of the hairs—they neither change color, lose their glossy appearance, fall out, nor break off. Nor has anyone ever succeeded in demonstrating the

presence of fungus therein."¹ It remained for Sabouraud, to whom we owe epoch-making discoveries in connection with the trichophyton fungus and related organisms, to correctly interpret the meaning of the immunity of the hair in regions such as the pubis and axilla, attacked by eczema marginatum. He established the fact that these eczema-like forms of ringworm are produced by an organism which differs "botanically . . . from all the ringworm fungi so much that the differentiation may be made by a glance at a preparation through the microscope." This fungus, to which he has given the name *epidermophyton inguinale*, differs from the ordinary varieties of the trichophyton not only microscopically, but culturally as well; and unlike the trichophyton, does not invade the hair, but the upper layers of epidermis only. Whitfield, who has reported from time to time a considerable number of cases of eczema-like ringworm of the hands and feet, divides them into three varieties: In the first there is a vesicobullous eruption which often appears suddenly and presents the features of an acute eczema; indeed the differential diagnosis is quite impossible without the aid of the microscope. In cases of this type the inflammation is at times quite severe: in one under Whitfield's observation the hands and feet were swollen, covered with vesicles which in the palms had run together to form bullae. Fungus was found in great abundance in the roof of the vesicles. The author believes some of these cases are the result of infection with an ectothrix instead of the epidermophyton. The second variety resembles an intertriginous eczema, and is found chiefly on the under surface of and between the toes, although the hands may be likewise affected. This form, which commonly follows an acute attack, is very chronic in its course. In the third variety, which was described by Djellaleddin Monkbatar in 1892, the palms and soles are the seat of a more or less marked hyperkeratosis which is usually preceded by a vesicular and pustular eruption. In this last variety, according to Sabouraud, we have to do with a genuine trichophytosis; but Whitfield believes this form may also be produced by the epidermophyton, having obtained cultures of this organism from two cases.

The frequency with which this parasitic eczema occurs is considerable, and it will almost certainly be seen much more frequently than at present when we have learned to suspect the presence of fungus in every case of eczema of the fingers and toes and to examine such cases microscopically. Whitfield saw fifteen cases in a period of three years, and Sabouraud asserts that eight out of every ten cases of so-called intertrigo of the toes are actually parasitic the result of infection with the epidermophyton fungus. Many of these cases have been preceded by eczema marginatum of the groin or

¹ Hebra on Diseases of the Skin, Appendix, vol. v, Sydenham Society's Translation.

axilla; and it has been observed that they are much more common in the well-to-do classes than in those who are seen in the out-patient department of the hospitals.

A final word as to the treatment: In our own limited experience we have found the ointment suggested by Whitfield, which contains 3 per cent. of salicylic acid with 5 per cent. of benzoic acid, most effective; but it cannot be used, as Whitfield has pointed out, without some degree of caution in markedly inflammatory cases, as it occasionally produces considerable irritation.

AORTIC ANEURYSM WITH RECURRENT FEVER.

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Mrs. M., aged thirty-six years, a charwoman, was admitted to the hospital October 18, 1913. She was a vigorous woman, with high color, but she said she was considerably paler than usual. Her father died of aneurysm. She had two living children and one stillbirth, twins. She lived irregularly and drank strong liquors to excess. Five or six weeks before entering the hospital she is said to have been kicked below the right scapula. She complained of pain in this part, and she was troubled with nausea and vomiting. Over the part there was dullness, and the breathing sounds were weak. There were 13,500 leukocytes per centimeter, the increase being in the polymorphonuclear cells. She did not appear seriously ill; with the fall of temperature the leukocytes returned to normal and remained so even in the recurrent attacks of fever. The signs in the chest grew gradually less marked and the pain ceased.

In the general examination of the chest signs of dilated aorta were found. Its pulsation could be easily felt below the episternal notch. Later, by the screen, a pulsating knob on the lower surface of the transverse part of the arch was seen. The Wassermann test gave a marked reaction.

She was kept five weeks under observation in order to note the natural course of the fever—it showed little if any improvement. Then mercurial inunctions were made and potassium iodide given. There was only one sharp rise of temperature after that, but slight, somewhat irregular fever persisted, and six weeks later salvarsan was resorted to. A first intravenous injection of 0.3 gm. was given. There was no reaction. Eight days later 0.6 gm. was given, still without reaction. A similar dose was given eight days later, followed by a slight short reaction, the temperature rising to 100° F., but fell to normal and remained so. A fourth dose was given after