we measure from $\frac{1}{10}^{\circ}$ C. to $2\frac{1}{2}^{\circ}$ C. Lowering this knob and raising the third one, we throw in the resistance of spool No. 2, which quarters the deflection. Therefore, 5° galvanometer scale = 1° C., and we measure from $\frac{1}{20}^{\circ}$ C. to 5° C.

We have thus far dealt with cases in which the relative temperature of parts at the moment of observation only was concerned. Suppose, however, we wish to make a prolonged experiment on the temperature of a part. If the unmarked pile be placed on another part of the body, it is obvious that, in an experiment of any duration, this part may alter in temperature as well as the part under observation, and hence our results may be confused. To avoid this, we use one pile only on the body, and expose the other to a constant source of heat—the current thus generated being opposed in the galvanometer to that of the pile placed on the body. It is for this purpose that the lamp and brass stand are used. The unmarked pile is fixed in the clamp at the end of the horizontal arm of the stand, the clamp being applied between the points of exit of the wires of the pile and their entrance into the binding-screws of the latter. Care must be taken that the binding-screws of the pile do not touch the brass clamp, otherwise a connection may be established across. The positive pole of the pile is connected with binding-screw No. 3, and the negative pole with binding-screw No. 4. The marked pile is connected by its positive pole with binding-screw No. 2, and by its negative pole with binding-screw No. 1. It will be seen that, thus connected, the current from the unmarked pile passes in the track of the resistance coils, while that from the marked one passes directly through the cups forming the key. We have thus two separate circuits opposed to each other. In experimenting with this disposition of the apparatus, we proceed as follows. The lamp being lighted, the stand bearing the unmarked pile is placed in front of it, the face of the pile being turned towards the flame. The marked pile is secured to the part to be experimented upon; and, after raising the knob of spool No. 3, we lower the first knob (the key) and note the position of the index. If the current from the pile on the body be the stronger of the two, the index will, of course, be to the north of 0° ; if, on the other hand, the current from the pile in front of the lamp be the stronger, the deflection will be to the south of 0° . By regulating the height of the flame and the distance of the face of the pile from the lamp, we can bring the index to 0° . Any alteration in the temperature of the part under consideration will now show itself, in the case of a rise of temperature, by a deflection north; and, in the case of a fall, by a deflection south. The object of interposing the resistance of the wire on spool No. 3, is to check the “leakage” of the current of the pile placed on the body into the circuit of the other pile. A certain portion of the current of each pile will pass through the circuit of the other, instead of through the galvanometer. In the case of the pile placed in front of the lamp, this loss is of no account; but in the case of the other pile the loss is important, and must be limited. With this arrangement of the apparatus $23\frac{1}{2}^{\circ}$ galvanometer scale = 1° C.

In conclusion, the writer would say that the instrument could have been made much more delicate, and, in fact, could have been improved upon in many ways, had he not endeavoured to reduce its cost to the lowest possible point.

CALCULUS IN URETHRA OF A CHILD.

H. SPARROW, aged 4 years, was admitted into the Home for Sick Children, Sydenham, on December 19th, 1874, with retention of urine. For several days, it appears, he had manifested symptoms of great irritability of bladder. Upon examination, there was found to be priapism, with an elongated prepuce, which was distended with urinary excretion. There was constant stillicidium urinæ. The bladder was distended, and painful upon manipulation. The penis was much swollen and œdematous. The countenance was distressed and anxious; pulse frequent. My colleague Dr. Bird kindly administered chloroform, when a catheter was inserted into the preputial orifice, but could not be introduced into the meatus urethræ. The prepuce (rather than circumcision) was slit up by means of a curved bistoury, and just within the urethra was discovered a small round calculus, firmly impacted, giving rise to the retention. After passing a bent probe beyond the calculus, it was at length hooked, and ejected with a certain amount of force, causing it to fall upon the floor of the room. Its character was phosphatic. A catheter was then passed, and the over-distended bladder relieved of its contents. After the application of two sutures to the wound, the penis was enveloped in oiled lint, and the child was put to bed, when he almost immediately fell into a tranquil sleep. He is now convalescent, although not yet discharged from the Home.

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Honorary Surgeon to the Home for Sick Children, Sydenham.

CLINICAL LECTURE

ON

ITCH IN PRIVATE AND IN PUBLIC PRACTICE, AND ITS TREATMENT.

By TILBURY FOX, M.D., F.R.C.P.,

Physician to the Department for Skin-Diseases of University College Hospital.

GENTLEMEN,—There are certain differences in the cases of itch that come under our treatment in public and in private practice respectively, to which I wish particularly to direct your attention. By public practice, I mean such as hospital, infirmary, and Poor-law practice, amongst the poorer classes. The matter is one of practical importance to you. You know that, in describing scabies to you, I do not follow the usual method of books, and divide the disease into papular, vesicular, and pustular scabies, and so forth; but I speak of the disease as consisting in an *essential* element or lesion, the acarus in and with its furrow, and certain *accidental* concomitants, which result as consequences of the irritation set up, and the scratching practised for the relief of the latter; of, in fact, the acarian furrow and imbedded acarus, and the results of irritation. These latter vary in kind, and include hyperæmic papillæ and follicles, vesicles, pustules, and excoriations, etc. Now, in private practice amongst the better classes, the differences in cases of scabies, as compared with those observed in hospital practice, are those of *degree*, not kind, and have reference chiefly to the *accidental* concomitants, and only slightly to the essential lesion of scabies.

In private practice, cases are occasionally met with equal in severity to any that are seen in public practice; but, on the other hand, as the rule, they are not so severe, and the disease is not so extensive, and *very frequently in private practice instances come under observation in which the accidentals of scabies are scarcely if at all marked*. There are a certain amount of itching, and an acarus or two here and there, and nothing more; and such cases are often erroneously diagnosed. There are many instances of scabies only a slight shade worse; a few acarian furrows, with a few papulations.

The variations are due to several causes, chiefly to the observance of greater cleanliness, the seeking of medical advice earlier (so that the disease has not time to put on the aspect of severity), and to the better nutrition, amongst the better to do, as compared with the poor classes. Cleanliness has greatest influence, because it is a great check to the development, and migration from part to part, of the acari; and malnutrition amongst the poor favours the development of the pustular concomitants; and, lastly, the longer the disease lasts, the greater, of course, is the scratching. When want of cleanliness, much scratching, and malnutrition go together, the worst cases of scabies occur, and they may now and then, as I have said, be met with in private practice. But, inasmuch as private patients are more cleanly than public ones, seek advice earlier, and are well fed, scabies amongst them occurs in its least expressed form. But even when the disease has existed some time, it is surprising how slightly marked the disease is in some cases, on account of the extreme cleanliness observed, and the repeated washings practised by private patients.

It is with these slighter cases of scabies that I wish to deal specially—with those in which a solitary or a few acari are present, and very little else. A hasty observer may readily overlook the nature of such cases as those to which I now refer more particularly. I occasionally see instances of scabies which, at first sight, would seem to be instances of pruritus simply. There are two circumstances, however, about them, which should always put you upon your guard. The one is the seat of the pruritus—viz., the front of the abdomen, the penis, the inner and upper part of the thigh, and the front of the forearms; and the other is the occurrence of the pruritus especially, or perhaps only, at night, when the sufferer gets warm beneath the clothes. If careful examination in such cases be made, a reddish papulation may be detected along the upper line of the penis, or a solitary acarian furrow at one of the interdigital spaces or about the wrist; and this may not be readily found. I have often detected after careful search a stray furrow concealed by some of the little folds of skin in the interdigital spaces, which had escaped observation for awhile. About the forearm may or may not be a few very delicate papulations that require, for their clear detection, that the skin should be looked at obliquely. Of course I mean that, in the cases I describe, acari have been actually extracted from these solitary cuculi. There may be no eruption anywhere but on the penis, one or two acarian furrows being seated there. I have known such cases complicated by glandular swellings in the groin, and mistaken for syphilis; but, if careful examination be made,

the acarian furrows may very plainly be made out; and the swelling accompanying the furrow lacks the indurated character of a true chancre, and is clearly simply inflammatory. In these cases of very slightly marked scabies, there is mostly no concomitant aid to diagnosis; I mean, for instance, no infection of others in the same family, etc. In a somewhat more marked degree, where there are a few acari and furrows about the interdigits, or the wrists, or perhaps the penis, with a small amount of rash on the forearms and the abdomen and thighs, the disease is very common. The acarian furrows, if the persons attacked be very cleanly, may readily be overlooked again, because they are not discoloured and rendered more distinctly visible by dirt; and frequently the acari are scratched away, and only the opened up cuniculus remains; but the form or skeleton of the cuniculus is seen. A little circular area, whence the cuticle which was upraised into the vesicle is gone, is seen; and, stretching away from this, is a line marked out on each side by loose cuticle, forming at one time the walls of the now opened up cuniculus. This is practically diagnostic of scabies. The papulation, if any, in these cases, about the forearms and the thighs, is made up of hyperæmic papillæ and follicles more or less scratched. There are no acari anywhere, but about the wrists and interdigits and the upper line of the penis. In these cases, the occurrence of itching at night, and the presence of fine papules on the anterior surface of the forearm and about the abdomen and thighs, at once suggest the probability of scabies being present.

The next degree of scabies of course does not differ from that ordinarily seen in public practice. I would say, then, as regards private practice, be very careful to satisfy yourselves that scabies is not at the bottom of what at first sight appears to be pruritus, which is intensified or developed at night, and is specially seated about the abdomen, the inner part of the thighs, and the forearms or hands. I know that such cases are oftentimes scabies, but are not diagnosed correctly till the disease develops to a decidedly significant extent.

Of course, I have been speaking of the disease in adults. In the case of children, there may be no characteristic evidence of scabies about the hands, but only about the feet and buttocks. It is often difficult to detect cuniculi acari in very young children. But one very good guide is to be found in the character of the eruption. The disease most liable to be confounded with scabies is lichen urticatus. Well, that consists of wheals leaving behind papules. It may be said to be an uniform disease as regards eruption. There is no eruption besides the wheals and papulation. But in scabies the eruption is multiform. It is papular, vesicular, and pustular. In public practice, the scabies of children is marked by complicating ecthyma, as might be expected; but this is not so common in my experience in private practice.

Turning to scabies in public practice, I have only to observe, on this occasion, that the diagnosis of scabies, as ordinarily seen, is, as the rule, very easy. But, in rarer instances, the disease is so general, and so intermingled with excoriations and pruriginous papules, etc., that it presents the aspect rather of a pruriginous eczema, or phthiriasis mixed with eczema, than a scabies, since the eruption is not confined to the usual seats of itch-rash, but attacks the parts about the shoulders, the back, the lower parts of the legs, and back of the forearm, as well. But there is one very safe guide in these cases; and that is, the history of the eruption, which shows that the latter began as scabies usually does, whilst acarian furrows will be detected, although most of them may be obscured by the free suppuration about them.

Treatment.—I have some special remarks to make in regard to the treatment of itch-cases in private and in public practice. You may very readily overtreat cases of itch in the former, for the reason that the disease is less severe, and the acari are not present over so large an area. In the mass of instances occurring in public practice, the disease exists, for the reasons I have before given, extensively over the surface, and acari have burrowed, not only about the hands, but in other parts of the body, especially the penis, the feet, the scrotum, and the abdomen perhaps. But in many cases in private practice, I mean amongst the well-to-do, the acari are *only* present at the interdigital spaces. Hence it is a rule of prime importance in treating itch, to accurately determine, at the outset, how far the acari have disseminated themselves about the body. The reason is obvious. There is no need to apply parasiticides to parts in which acari do not exist, because the irritation and eruption elsewhere are due to sympathetic action; and these irritated parts will get well if the acari be destroyed, and they do not require the use of irritant remedies, such as parasiticides are, but soothing remedies. The practice is to apply the remedy to every part of the body where eruption exists in cases of itch. Clearly this is wrong, from what I have just said. My rule is this: if the disease be recent, if it be only slightly marked, if it began about the hands, and there be no cuniculi about the penis, I order the parasiticide to be rubbed into the interdigits, the palm of the hand, and the wrists, and I apply a soothing

lotion to all other irritable parts of the body. If, however, there be—I am speaking of the slighter degrees of disease—cuniculi about the penis as well as the hand, and especially if the disease appeared to begin coincidentally in point of time by itching about the lower part of the abdomen, then I apply the parasiticide to the hand and the penis; but even here I do not rub in the remedies very long (for three nights and three mornings), and I only, for precaution sake, let the patient smear the parasiticide upon the scrotum and the thighs, and for two or three times. I then order a soap bath, a change of linen, and I expect my patient to be quite well. The absence of pruritic irritation at night on the third day I take as a good test to the cure of the disease. In no case do I use any but parasiticides of moderate strength; half a drachm of sulphur to the ounce of lard is a sufficiently strong ointment, if sulphur be the remedy chosen.

But I will suppose that a well marked case of itch comes before you in a well-to-do person. Here I recommend you not to depart from the rule I have laid down, viz., not to use your parasiticide generally to all the body, but to rub it freely in where the acari are, about the hands, the penis, and the scrotum, and to smear it gently on a few times only to the adjoining parts; to use it for three days only, and not in too great strength. This suffices to kill all acari, and the secondary results, viz., those of irritation, quickly subside. What frequently happens is, that the remedies kill the acari, but their use is persisted in longer than is necessary to effect this object, and only aggravates the already existing irritation and secondary eruption.

I repeat, then, by way of summary, that in private practice, if the disease be slight and recent, use the parasiticide to the hands only, and soothe the other parts with some emollient or astringent lotion or ointment; and, in all other cases, treat actively the hands and the parts about the genitals, but other parts only very slightly. In all cases, use remedies of moderate potency; at the end of three days leave off the parasiticide, give a soap and water bath, and see if the itching at night have ceased. If any vesicles appear between the fingers or about the wrists subsequently, these may be touched by the parasiticide. But if the latter be used for any length of time, the itching and irritation which had at first subsided, may increase, and this increase is often mistaken for an exaggeration of the itch, whereas it is that of the secondary pruritic eruption. In these cases, the skin becomes so irritable that it is a difficult matter to get it into a quiescent and healthy condition. *Overtreated cases of itch in private practice are by no means uncommon.*

I have one word to say, in conclusion, about bad cases in private and public practice, and the use of sulphur vapour-baths. In these bad cases, no doubt the acari are disseminated widely, and active treatment is needed. One remedy in common use is the sulphur-bath. I think a caution is needed as regards its use. I believe that it is abused. Though I much prefer a good soaking in a sulphuret of potassium bath, and the prescription of a mild parasiticide ointment, yet sulphur vapour-baths may be employed; but I think a single one properly administered—at most two—sufficient. I would have the patients well washed, first of all, with soap and water, and then put into the sulphur-bath. If the effect be that the pruritus at night is destroyed, I do not think it needful to repeat the bath, especially where the skin is much inflamed. You have seen, yourselves, many cases in which these baths have cured the actual scabies, but have set up a severe inflammation and pruritus in the skin that are most difficult to subdue. I never use sulphur vapour-baths in itch, on that account, except where the disease is of the severest kind, because I believe all the acari can be destroyed by simpler and less irritating applications. In these cases, the same rule holds good, I think, as in the simpler cases. It is easy to overtreat these cases. If, at the end of a few rubbings with mild sulphur or storax ointment the skin be less inflamed, less irritable, the vesicles and pustules drying up, and the patient get a good night, I consider that the itch itself is practically well, and I then treat by parasiticides the usual haunts of the acari and soothe other parts. But there is another very important matter in these cases. It is to keep the same linen on next the skin during the use of the parasiticide, and when a change of linen is made, to disinfect all the clothes by heat. I cannot now go into the question whether the acari dwell temporarily in the clothes. They can, no doubt, live long enough off the body in the clothes to be conveyed by clothes from one person to another, and, if so, then it is important to prevent these clothes from serving as the media of re-propagating the disease, or transmitting it from the infected to the healthy.

TESTIMONIAL.—The Huddersfield small-pox patients have presented to Mr. John B. Pritchett, the medical officer of health for the urban sanitary district, a gold pencil-case and a silver goblet. On the former is engraved, "To J. B. Pritchett, with a silver goblet, from patients in the Huddersfield Borough Hospital during 1873 and 1874."