

of forceps, small-tooth comb, or other means, and then examine the scalp with a lens, to see how the case is progressing, before applying the oleate again. Of course care must be taken that no mercurial symptoms arise during the treatment. If the 10 per cent. solution produces too much irritation, the 5 per cent. must be substituted. It is important to obtain the oleate from a first-class chemist.

After from three to six months there is very often a complete cure, but at any rate the disease will be very much better, and restricted to the original patches or a few disseminated stumps. At this stage of the case I strongly advise the treatment I call the artificial production of *kerion*—i.e., that swollen, raised, inflamed, and infiltrated state of the scalp, which sometimes accidentally occurs during treatment, and which always results in a speedy cure of the disease.

The artificial production of kerion.—Kerion should be produced, if possible, in old chronic small patches of ringworm that have resisted all other treatment for months, but not in those cases where the disease extends over a large extent of surface. Croton oil is the best irritant for causing this inflammatory condition, but it must be used with great caution, and at first only applied to a small place, and its effect watched. I generally put it on a patch the size of a shilling, or less, with a small camel's-hair brush, and order a poultice to be put on at night. Then, if it has not set up severe inflammation and pustulation by the next day, which is very rare, I apply it again, keeping poultices constantly on day and night. A daily application of the oil for three to six or ten days, together with constant bathing with warm water, and poulticing with linseed-meal, will rarely fail to set up such severe inflammation that the patch resembles true kerion. It becomes very tender, swollen and puffy, pustular, and is usually covered with a thick yellow incrustation. On removing this yellow substance with the point of the forceps, and a sponge and warm water, the skin underneath will be found very red and tender, and sometimes a muciform or purulent discharge exuding from the follicles, and, what is most important, *the hairs and stumps loose in the follicles*. They either come away with the discharge, or can be easily pulled out. If the patch be very much swollen the hairs, on being extracted, come out from a considerable depth, even half an inch.

Sometimes this effect is rapidly produced, at others it is most difficult to obtain; and you may apply croton oil over and over again without getting the swollen, puffy state of the scalp you require. Care should be taken not to produce an actual slough of the upper stratum of the skin. When the patch is so thoroughly inflamed and infiltrated that the stumps come out easily, I content myself with simple poulticing and bathing for a few days, and then, when the tenderness has abated, and the yellow incrustation has been removed by bathing, I begin to pull out all the hairs and stumps that are left on the patch, using for this purpose a broad-pointed pair of forceps.

The great aim of this treatment is to cause inflammatory swelling and effusion into the tissues around the follicles, so that the stumps which otherwise would break off on attempted epilation, will now come out with the discharge, or can easily be extracted; in fact, very often in a short time an inveterate patch of ringworm, that has withstood every other treatment for years, can be transformed into a smooth, slightly raised place, utterly destitute of all hair and stumps, and practically well.

Soothing remedies, such as poultices or water-dressing, should be applied till all the inflammatory swelling has subsided, while the stumps are removed day by day by the attendant. I usually see a case in this state every three to seven days, and carefully examine the spot with a lens to see if there are any stumps to be extracted. If it happens that any of them break off on attempted epilation, it is better immediately to place a minute drop of croton oil on the follicle, which will probably cause the expulsion of the stump in a few days. At the next examination I follow the same plan, and so on until I cannot find a single stump, even after watching for a fortnight. Then I apply tincture of iodine or cantharides to the places, which stimulates the new downy hair to grow. When once a stump has been thoroughly extracted, there is no fear of the new hair becoming infected with the fungus, as some of the parasiticide used is sure to get into the follicle, and destroy any conidia left there.

If there is more than one patch at first, I soon begin to apply the oil to the second or third, when I see how

the first one is progressing, and thus try to get every place converted into kerion. The largest patch I have inflamed at a time has been about the size of a five-shilling piece, but I should never attempt such a large one at first, but would prefer to treat half or a third of it, and then the rest.

Even if the swollen condition of kerion cannot be produced, this treatment very rarely fails in loosening the stumps and curing the disease. While the croton-oil treatment is being followed out, a little oleate or carbolic-glycerine should still be applied to the other parts of the scalp. Even when one or more patches are treated in this way, in the course of time other small places or isolated stumps reappear here and there; therefore, the whole scalp should be examined when the case is seen week after week, and any stumps removed or touched with croton oil, as described further on under disseminated ringworm. But when the case has been pronounced absolutely well, these isolated stumps will often crop up time after time for months. Thus children that are supposed to be cured ought to be examined regularly for a few months.

Some remedies may produce kerion unexpectedly. I have seen carbolic-glycerine and citrine ointment act in this manner; and lately oleate, applied to the heads of three children in one family, produced severe kerion with excellent results in two cases. This is the only time I have seen oleate produce kerion.

Sometimes, if croton oil fails to produce the necessary inflammation, I use a minute quantity of tartar emetic ointment as well; but this is more apt to produce a slough than the oil, and should only be used with extreme caution on a place already sore. The friends are, as a rule, greatly frightened when kerion is produced; so it is better to explain to them beforehand the reasons for adopting this treatment, and the result expected from it. The condition is somewhat painful, and much resembles the formation of an abscess; the glands often enlarge about the back of the neck, but I have never seen them suppurate.

Especial care should be taken not to apply too much oil at a time, and that the poultice is firmly fastened to the spot, otherwise the oil may run on to other parts of the head or forehead; or, by the poultice slipping, kerion may be produced just where it is not wanted. If the oil by any means gets on to the pillow-case, and the child rubs its face on it, of course a pustular eruption will follow. I lately saw a little girl who had managed to rub the oil on the pillow-case, and then all over her forehead and cheeks. This produced a most universal crop of small pustules, and gave me very great anxiety lest some marking should ensue; but with soothing applications and simple ointment, the slight crusts were speedily removed, and not the least mark remained. Of course, with proper precaution, this should never occur.

The bare patches that remain after this treatment may continue for some months, but the hair will grow again sooner or later. I have seen a few cases where, after very severe irritation and some slight sloughing, the hair has not thoroughly grown again. But, as this remedy is only to be used after all others fail, it is better to get a slight loss of hair in one place than for a child to be unable to go to school, and thereby lose education. Even if some of the hair-follicles are destroyed by this treatment, many hairs will still grow on the place, and a distinct bald patch is never left. Croton oil must of course be applied by the medical attendant; and I may mention, lastly, that I have never seen any internal irritation from its use, or erysipelas.

(To be concluded.)

ABSORBENT AND MEDICATED SURGICAL DRESSINGS.

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BEFORE me is a cup of water, on which a piece of fine cotton-wool, like that used in jewel-boxes, has floated for thirty-eight days. I have frequently pushed the cotton to the bottom of the cup, but it has instantly risen to the surface, and seems likely to float indefinitely. Pledgets of cotton made absorbent by removal of its oily matter, when dipped into the same cup, sink below the surface of the water in three seconds, and rapidly fall to the bottom.

When I first became acquainted with this fact, I made

pads of the absorbent cotton in fine gauze, believing that they would be softer for compression, and more favourable to the dryness of wounds by their superior absorbent power, than oakum pads. The gauze used was very fine and unbleached, similar to that employed by nurserymen (under the name of "tiffany") to stretch under the roofs of their conservatories. Experiment proved that the gauze in question is non-absorbent to such a degree, that a pad, made by covering with a single layer of it a pledget of absorbent cotton, will float on water for many days.

The desideratum suggested itself, of making the gauze absorbent like the cotton, and I find that this result is attained by the process of bleaching. Pads made of the absorbent gauze and cotton take up water as rapidly as blotting-paper, and sink to the bottom of a vessel in a very few seconds. As one illustration of the practical advantage of these dressings to wounds, I shall abstract the main facts of a clinical history, for recording which I am indebted to my dresser Mr. Arthur Holdsworth.

A woman, aged sixty-one, in good health, was admitted into the Queen's Hospital under my care, Sept. 18th last, with a swelling over the left shoulder and side of neck, extending laterally from the armpit to a level with the larynx, covering the posterior triangle and the lower half of the anterior, the whole of the clavicle and the upper part of the pectoralis major. The antero-posterior axis was the longest, and measured thirteen inches.



The tumour had been of slow growth for ten years, rapid for the last six months. It was elastic and fairly movable, and only troublesome for its size and weight; covering skin dimpled. Diagnosis, lipoma.

Operation.—On Sept. 24th, under ether, I made an incision from a point one inch outside the episternal notch, to another about midway along the spine of the scapula. The growth was then dissected from off the subjacent tissues, from behind forwards, being very adherent over the acromion, but free and lobulated in front. It reached to the trapezius, and extended its lobes deep into the anterior triangle of the neck, exposing on its removal the pleura covering the apex of the left lung, and the great vessels and nerves to the head and upper extremity. Very few drops of blood lost; no vessel tied. Immediately after the removal of the tumour, the wound measured superficially eight and a half by eight and a half inches. I brushed it out lightly with styptic colloid, brought the edges together with seven silver sutures, inserted a drainage tube, and compressed with a shoulder spica, over oakum pads. The patient passed a good night, and next morning, the temperature was $101\cdot5^{\circ}$, pulse 118, respiration 32. There was not a single bad symptom.

On the 1st October (seventh day), pulse 94; respiration 24; temperature precisely normal, which it continued throughout, with the exception of only one day (Oct. 13th), when the old lady had a slight cough for a few hours, and the

temperature rose to $101\cdot2^{\circ}$ at night. Next morning it was again normal.

At the end of a week the patient was allowed to get up for a few hours, after the removal of the drainage-tube and sutures and the application of fresh dry pads and compression. The edges were united for nearly the whole length, but in the course of another week the union gave way a little. It was maintained with strips of adhesive plaster and compressing pads of absorbent muslin and cotton. The wound was not exposed for another week, and the cicatrix was then quite solid, as shown in the annexed woodcut.



I have since used the same materials, with the occasional addition of pitch-pine sawdust in absorbent gauze, with the very best results in a variety of cases; amongst others, in a compound fracture through the ankle, a large sloughing ulcer of the foot, a scirrhus ulcer of the mamma, and an extensive gangrenous wound over the breast.

My friend and colleague, Professor Bostock Hill, has instituted experiments, which prove that after treating with iodine, borax, and tannin, the materials above referred to preserve their absorbent properties, and I confidently anticipate that absorbent and medicated dressings will prove of essential service in wound-treatment.

The absorbent pads are made by lightly folding the muslin over absorbent cotton without stitching. I venture to suggest to accoucheurs, that in childbed such pads would be cleaner, safer, and more comfortable than napkins, and a large number of them might be used and burnt at far less cost than washing. The materials are cheap, and most agreeable to manipulate. I shall be happy to furnish specimens to surgeons who may desire to try them, and I take this opportunity of acknowledging the cordial assistance I have received from the manufacturers, Messrs. Robinson and Son, Wheatbridge Mills, Chesterfield.

Birmingham.

CALOMEL FUMIGATION.

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I AM induced to bring to the notice of the medical profession a little apparatus for the purpose of calomel fumigation, which I have never seen used at any of the London hospitals, but which has been employed frequently in some of those in Dublin. It was originally invented, I believe, by Mr. Kane, late surgeon to Jervis-street Hospital, and has been used with much success in cases of syphilitic and other ulcerations about the throat and mouth, where local application of mercury seemed desirable. The apparatus, as invented by Mr. Kane, consists of a glass tube about eight inches and a half in length, three-quarters of an inch in diameter, which tapers towards a point for about two inches at one extremity, and a bulb blown on one side of the cir-