

opened into the bladder, and the fatal result took place not later than three weeks subsequently.

When once formed, the communication between the two cavities led to distinctive signs of the injury of each. On the one hand, the contents of the jejunum passed into the bladder and urethra; on the other hand, the urine entered the jejunum and mixed with the chyme. Severe inflammation followed in both the viscera, with characteristic local suffering. But the admixture of urine with the food at so high a point in the digestive canal appears further to have led to more general symptoms. Much of it seems to have been absorbed, and, returning to the kidney, to have been added over and over again to the circulating fluid. This probably explains the extraordinary fetor of the skin, and perhaps also the unusual condition of the brain.

From the first establishment of the opening recovery was hopeless, as by no device then known to me could the fæces be diverted from the bladder, or urine from the bowel. I am now indeed inclined to think that the distressing suffering in which the poor fellow died might have been mitigated by continuous irrigation of the bladder. A stream of liquid injected into the bladder would have passed on into the bowel, carrying with it all the fæces which had entered by the aperture, together with the urine in a state so diluted as no longer to irritate and inflame the intestinal mucous membrane. Though the idea seems perhaps a strange one, I think that bland nutritive materials also might have been thus projected through the bladder into the intestine, and food which was intolerable in the stomach have been assimilated in the jejunum. The introduction, for instance, of a few pints of milk into the bladder daily, in small successive portions, would have very much soothed that organ, have contributed to the general nutrition when it reached the jejunum, and possibly have averted the cerebral mischief, so far as that depended on the absorption of acrid alkaline urine by the bowel. The method of effecting this combined nutrition and irrigation would have needed some care in selecting it, and some ingenuity in its adaptation. The urethra could not have been expected to endure the frequent, not to say constant, employment of the catheter which would have been necessary. But it is probable that the use of the catheter might have been dispensed with, and that the injected fluid, little resisted by a bladder with a hole in its wall, might with moderate force have been driven along the urethra through the short nozzle of a syringe. The even flow of liquids down the long arm of a syphon-tube might have made that a preferable kind of force to the interrupted action of a syringe. Should these plans have failed, or proved useful for a time only, it might have been proper to have attempted the same object by puncturing the bladder, and retaining a tube in the aperture. The plan of transfixion, or double puncture, which I devised, and described in a clinical lecture last year,* would not ordinarily be suitable, though its principle and great convenience might render it advisable in some circumstances. But though the case, since the post-mortem revelation of its nature, has served to suggest to me these palliative measures for the treatment of others, none of them were available in it; and life shortened with increasing rapidity, as the urine became more concentrated and irritating in the bladder, and more poisonous when absorbed into the blood.

IS ALOPECIA AREATA OR TINEA DECALVANS CONTAGIOUS?

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In a large parochial school at Hanwell, containing from 1100 to 1200 children, of both sexes, and from six months to fourteen years of age, a number of the children were found all at once to have on their heads patches of baldness quite smooth and pale. The patches varied in size from that of a fourpenny-piece to an inch or more in diameter. On some children there was but one bald spot; on others, two or three. Most of the patches were rounded in outline, but some were more irregular in shape. The number of children affected was 43, and they were all girls from seven to fourteen years of age, who lived together. There was no case of the same kind amongst the

infants or amongst the boys, who occupied a separate part of the building. On more careful inquiry, it was ascertained that one girl had been suffering from this disease of the scalp in an aggravated form for one or two months, and had been allowed freely to associate with the others.

On the 30th of April one of the attendants observed that another child had a bald spot on her head, and called the attention of the doctor to it. This led to an examination of all the children's heads, when it was found that between 30 and 40 girls were affected in the same way. In the course of the following week five or six fresh cases were noticed, but after that period none were found.

On observing the patches closely, they were seen to be of the same colour as the rest of the scalp, and perfectly smooth. Immediately around the bald part the hairs came out too easily, and were seen to have scarcely any bulbous enlargement. In many cases at the very edge of the denuded patch could be seen a few short hairs about the sixth of an inch long, which were thicker at the free extremity than at the part near the follicle, but not opaque or darker in colour than the other hairs. The hairs examined microscopically were found to be atrophied at their bulbous extremity. The short club-shaped hairs just mentioned were found to have a tapering bulb and a thickened free end, which was more opaque than the rest of the shaft, and exhibited a cluster of fibres radiating outwards in a brush-like manner, such as I have constantly seen in examining the hairs from patches of alopecia areata. The structure of these short hairs was quite normal, except at their free ends. In the root-sheaths of two or three hairs I found a number of oval and quadrangular cells placed end to end, or clustering together, looking like vegetable spores. They were insoluble in liquor potassæ, ether, and strong sulphuric acid. These spore-like bodies were about the 1/3600th of an inch in diameter. There were also on one of the hairs what appeared to be the mycelium of a fungus. The amount of parasitic growth was altogether but very small.

The main interest of this outbreak of scalp-affection depends on its relation to the question of contagion. Nearly all authors except Mr. Erasmus Wilson are agreed that the common ring-worm, or tinea tonsurans, is contagious: on that point I have no more doubt than I have of the contagiousness of small-pox. But in reference to this disease, tinea decalvans, or alopecia areata, there is more room for doubt. In France it is very commonly regarded as a contagious disorder, but in this country it is usually set down as non contagious. It certainly is not highly contagious, for a single case is often seen in a public school or a large family for many months and not be propagated to any other child. There are, however, some cases recorded by Mr. Hutchinson which seem to point to its being capable of propagation by contagion.*

This outbreak at Hanwell School appears to me to prove its contagious nature. Except on this supposition it is not easy to understand why the only children attacked were those occupying that part of the building in which there had been a girl suffering from the same affection for some time previously. There were in other parts of the house boys of the same ages, of similar constitution, having the same diet, and in every respect similarly treated. If the outbreak had depended on atmospheric causes, or on the diet or general management of the school, the boys and infants should have suffered equally with the girls.

I have been occasionally consulted on the question whether it is safe to admit a child suffering from this form of tinea into a public school. I have been in the habit of saying that there was no risk of its spreading; but I confess that the history of this outbreak at the school at Hanwell will make me more cautious in future as to such a statement.

I do not propose to enter in this paper into the question of parasitic skin-diseases, but will just say that I have examined microscopically the hairs of many children affected with this form of disease, and have occasionally met with distinct evidence of parasitic growth in the hairs and the epidermis. In many other cases I have failed to detect such evidence.

In this disease, I think it is open to question whether the parasite is an essential part of the disease, or merely an accidental complication frequently present. In the diseases tinea tonsurans and tinea favosa it is certain that the diseases cannot exist without the vegetable growths.

I am inclined to believe that alopecia in circumscribed patches may arise independently of the parasite. It is certainly a hasty generalization to assert that all diseases of the hair are due to parasites, and that the nutrition of the hairs cannot be so affected as to induce atrophy of their bulbs, or so as to split at the free

* THE LANCET, Aug. 22nd, 1863.

* Path. Soc. Trans., vol. xiii., p. 266.

extremity, unless there has been a vegetable growth on them. I have seen splitting of the hair at the free end repeatedly where there was no reason to suspect, and no sign of, a fungous growth; and I believe the hair-bulbs dwindle and the hairs fall out often without parasitic growth.

In this outbreak at the school I found distinct parasitic growth; in other cases, even when baldness has been extending rapidly, I have failed to detect it. In this disease we must not expect to find the parasite when the hairs have all come out, the parasites having done their work and exhausted the soil, and the disease is not spreading. The only time to look for it is when it is advancing and attacking fresh hairs. At this stage of the disease I have always found the hair-bulbs undergoing atrophy, and usually a number of short, club shaped hairs, with a tufted fibrous free extremity, similar to what is so frequently seen in the hairs of tinea tonsurans, but not affecting the part of the hair between the bulb and the free end. In addition to these changes, which are constant, I have occasionally seen spores, and more rarely mycelium of a microscopic fungus in the root-sheath of the hair and in the epidermic scales scraped from the scalp.

As to treatment, what I have found the most beneficial is blistering occasionally with a solution of from two to four grains of cantharidin in six drachms of glacial acetic acid, and two drachms of spirit, and the use of an ointment of cantharides in the interval. Under this plan of treatment the cases at Hanwell very rapidly improved. There was but very little spread of the disease after the children were brought under treatment, and on the 9th of June I noted that many of the patches were already getting covered with downy hair of a lighter colour than the rest of the scalp. The hairs do now come out more easily near the affected patches than they do at other parts.

This disease, if left alone, will usually get well in the course of several months or years, unless it occurs in people past middle age. Occasionally cases are seen in which there is loss of hair, not only over the scalp, but over the entire body, all the downy hairs disappearing as well as the coarser hairs of the head, face, genital regions, and axillæ. These cases are usually incurable; they may appear independently of other disease in the system.

Mr. Hunt is of opinion that an arsenical course will generally cure circumscribed baldness by improving the nutrition of the scalp. I have tried this plan of treatment, but cannot say that I have found cases thus treated get well so quickly as those which have been treated by local stimulation alone.

The common ringworm (tinea tonsurans) is seldom completely absent from large parochial schools, such as the one at Hanwell. Unless great care is taken, this disease spreads very much amongst the children. It is, however, so far as my experience has gone, only an occasional occurrence to find a case of tinea decalvans in these schools.

Upper Gower-street, Sept. 1864.

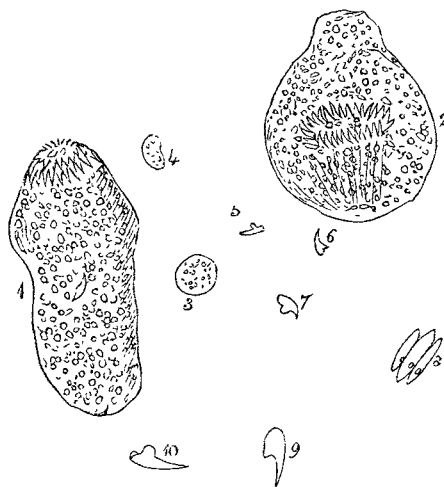
REPORT OF A CASE OF HYDATID DISEASE (ECHINOCOCCUS HOMINIS) AFFECTING THE KIDNEYS.

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PRIVATE P—, aged thirty-five; countenance sallow and climate-worn; served in India for eleven years. He stated that shortly after his arrival in England from India, in 1855, he began to experience dull aching pains in the loins, especially over the left kidney; and that he had been annoyed by these pains frequently since, but more so during the last three years he had been quartered in Malta. In March, 1862, the pains increased in severity, so that on the 2nd of April he came to the hospital complaining of intense pain in the lumbar region shooting down the ureters into the bladder, but more especially on the left side. It became so intense as to oblige him to walk in a bent position, and lie in bed with his legs drawn up. He complained likewise of a pricking and uneasy sensation along the course of the urethra. His urine was scanty, and the skin hot and feverish. From the intensity of

his sufferings it was surmised that one or more renal calculi were making their way into the bladder. Neither the warm bath, fomentations, nor opiates seemed to relieve him, until the following morning he got up to void urine, but finding some obstruction in the canal he was on the point of sending for aid, when suddenly, after a little straining, he expelled a gelatinous mass, which turned out to be true echinococci cysts. A few were entire, and of the size of a hemp-seed; but the larger individuals were much torn. He voided a few more about an hour afterwards, when the symptoms disappeared, and in the course of a few days he returned to duty apparently cured. For the following four months he continued free from all of the above symptoms, and enjoyed a degree of health he had not experienced for many years, when suddenly, on the 4th of August, he was seized with darting pains in the urethra, and a desire to micturate. After making violent efforts for a few minutes, a large torn cyst came away with a copious discharge of urine, which was slightly acid, and contained abundance of epithelial cells. Instant relief followed. On the 18th of the same month he passed one large and several small echinococci, preceded by exactly the same symptoms, and followed by the same result. Again, on the 26th, after a sudden seizure in barracks, he voided a colony of cysts, varying in size from one as large as a pigeon's egg to many entire specimens of microscopic dimensions. As usual, complete relief was the result. On the 25th of September, after an interval of ease, his sufferings returned as before, and lasted for several hours, during which he kept passing large quantities of cysts. The largest individual was much torn, but had evidently equalled a hen's egg in size. On this last occasion he voided more than at any one former period. The result was that for eight months he seemed to have got completely rid of the parasite, and his general appearance betokened a decided improvement in health. Suddenly, however, on the 14th of May, 1863, the lumbar pains shooting along the ureters and urethra set in, and he voided a few cysts; and scarcely a week passed that he did not get rid of what seemed entire colonies. Racking pains in his back and limbs, accompanied with constant thirst, loss of appetite, and increasing debility followed, so as to render him perfectly unfit for military duty. Accordingly he was invalided, and sent to England in the following October. Since then he has been discharged from the service.

Remarks.—The microscopic examination of the cysts showed the double circlet of hooks, varying in number (as many as forty were counted on one crown); few seemed complete, having lost many of their hooks either by decomposition or the rough usage sustained during their passage outwards. As seen on Figs. 1 and 8, occasional hooks were found detached or lying



Figs. 1 to 7, $\times 360$ diameters. Figs. 8 to 10, $\times 500$ diameters.
Size.—Fig. 1, 1-300th \times 1-760th inch. Fig. 2, 1-400th \times 1-500th inch.
Fig. 3, 1-1800th inch.
Average hooklets, 1-1000th \times 1-4000th inch.

on the surface of the cysts. Each hook was slender, tapering, and acute. Two cell-walls were distinctly visible, and appeared to be perfectly structureless and transparent until treated with caustic potash and red ink, when they presented a stratified and wavy appearance. The four suckers mentioned by authors could not be made out even by a lens magnifying to 500 diameters. The circlets of the large vesicles were not visible, possibly from having been removed by friction; there was no difficulty, however, in finding them in individuals as large as a hemp-seed, and such as are here shown, together with the calcareous corpuscles which were abundantly strewed