What can be more conclusive as to my real opinions than the above passages? Can the distinction between use and abuse be more forcibly drawn? Is it possible, I ask, that Dr. Tyler Smith can have overlooked or misunderstood these passages? And if he cannot, has he acted justly towards me, or candidly towards the profession, in publicly accusing me of doctrines which he well knows I have never either taught or practised? He must excuse me if I venture to make one more prediction—viz., that the day will come when he will feel that it is an error in judgment—to say the least—in a scientific controversy, to endeavour to enlist the sympathy and acquiescence of his readers by misstatement, by passionate appeals to prejudice, and, still worse, by groundless insinuations. This Dr. Tyler Smith did in 1850, and this he again does in 1856.

Grosvenor-street, 1856.

ON THE
NATURE AND TREATMENT
OF
LEPROSY,
ANCIENT AND MODERN;
INCLUDING THE
JEWISH LEPROSY, LEPROSY OF THE MIDDLE AGES, LEPROSY
OF THE CRUSADES, LEPROSY OF THE ARABIANS,
AND
ELEPHANTIASIS OF THE GREEKS:
WITH
A DESCRIPTION OF THE FORMS UNDER WHICH LEPROSY EXISTS
IN BRITAIN AT THE PRESENT DAY.

BY ERASMUS WILSON, Esq., F.R.S.

(Continued from page 310.)

THE local treatment of the ulcers of elephantiasis is to be conducted according to the common principles of surgery,—to allay inflammation, control decomposition, assist the separation of dead parts, and promote the healing process. The enumeration of these indications suggest the means and remedies which should be employed. Schilling recommends the tinctures of aloes, myrrh and amber, useful stimulants, which in modern surgery have been transferred to the stable, and given place to better means. He cautions us against the use of oils and fats, and strongly against mercurial ointments, which, he says, the skin cannot bear so long as the morbid miasm retains its place within the body.

It may be gathered from the views of treatment now put forth, that we must rely upon ourselves, and not upon any fortuitous gifts of Providence, to cure elephantiasis, and on a due appreciation of this truth will, in a great measure, depend our success, and the safety of our patient. We must use, and learn to use effectively, the means we have, and in doing this, we shall acquire a more powerful specific than any that can be presented, ready prepared, to our hand. If after this essay the specific should arrive, we shall be the better able to use it judiciously; if it should not be forthcoming, we have discovered the means of doing without it. It is probable that elephantiasis would never have been the scourge to the world it has, if this truth had been felt and acted upon earlier; if physicians had set themselves to discover the cause of the disease, and followed up their search by working methodically to remove that cause, rather than puzzle themselves and their successors by vain theories, and equally vain experiments with the long list of simples which have been proved to be at least innocuous to man. Drs. Danielssen and Boëck, discarding all these empirical means, have determined the cause of the disease, be it miasm or poison, to be present in the blood. They have observed the alterations of the vital fluid occasioned by its presence; they have traced the morbid effects of that cause in its action on the nervous system, and on the various tissues of the body; they have pointed out that the morbid products are projected to the surface of the affected organs, and to the surface of the body, and they have established a principle of treatment which shall change the composition of the blood, alter and improve nutrition, and eliminate the poisonous elements of the

disease. In pursuing this principle, they have the means to a favourable issue in their hands, and I doubt not will successfully combat the disease which is now ravaging the shores of their country, and at the same time give an useful practical lesson to the world.

The treatment of elephantiasis, therefore, whether it present the tubercular or anæsthetic form, should be conducted on the same principle. Portions of the blood of the patient should be taken from time to time; the quantity and frequency to be regulated by his strength, and the blood so taken should be replaced by the nutritive matter derived from a well-selected diet. Thus the morbid blood will give place to a sounder and more healthy fluid. Alteratives should be given to alter and improve the chemistry of nutrition, than which none are better than arsenic judiciously employed, and cod-liver oil. Thus sanguification will be directly benefited, and with sanguification, as a matter of course, innervation. Elimination is to be rendered more energetic, to facilitate the requisite changes in nutrition. With this view the alimentary canal, the liver, the kidneys, the skin, are all to be brought into more active play, to which end saline aperients and diluents are the appropriate remedies. Elimination, stimulation, and counter-irritation of that most potent emunctory, the skin, are all set in operation by baths—the sea-bath, sulphuretted bath, and caustic bath—already mentioned; and, for a local purpose, the skin may be further stimulated by counter-irritants, and by the use of the moxa. Local symptoms, such as infiltration and thickening of the skin, require simply a local application of the same general principle, such as cupping or leeches; and the loss of sensibility of parts of the body, cupping and moxa to the corresponding part of the spine.

Having now discussed the general principles of treatment as founded on the observations and researches of Drs. Danielssen and Boëck, it will be well to pass in review certain specific remedies at present in use in those countries where tubercular leprosy still prevails. The most important of these remedies are the *Asclepias gigantea* of Hindostan, and the *Hydrocotyle Asiatica*.

The *Asclepias gigantea*, or *Rumex gigantea*, in the native language of Hindostan called Mudar, Muddar, or Mudarrh, has gained much reputation in the treatment of tubercular leprosy. Robinson, in his Essay on "Elephantiasis as it appears in Hindostan,"* remarks, that in the treatment of this disease, bleeding, mercury, and antimony, used singly, are of no use; but that the two last, combined with the root of the mudar, have been found successful when aided by the application of topical stimulants. The formula he proposes is composed of half a grain of calomel, three grains of antimonial powder, and from six to ten grains of the powder of the root bark of the *asclepias*, to be administered three times a day; and the local stimulant a weak acid solution (four grains to the pint, with ten minims of hydrochloric acid) of the bichloride of mercury, applied with friction to the local affection.

The *Asclepias gigantea* was discovered by Playfair, who called it *vegetable mercury*, and regarded it as specific in the cure of lues venerea, elephantiasis, and cutaneous eruptions. It is, he remarks, the most powerful alterative hitherto known, and an excellent deobstruent. In the *jugaru*, or leprosy of the joints, he never found it fail in healing the ulcers, and often succeeded in effecting a perfect cure of the disease. Robinson agrees with Playfair in the utility of the *asclepias* in elephantiasis, and bears witness to its "powerful effects as a deobstruent and sudorific in almost all cutaneous eruptions arising from obstructed perspiration and an apathy of the extreme vessels. Its action is quick and decided, causing a sense of heat in the stomach, which rapidly pervades every part of the system, and produces a titillating feel on the skin from the renewed circulation through the minute vessels. It does not appear to be useful or, indeed, admissible, where the affection is inflammatory or the eruption pustular. The great and rapid determination it causes to the skin has an obvious tendency to increase such diseases. I have tried it freely in lues venerea, but cannot venture to recommend it as a substitute for mercury. It will enable you to heal a chancre, but does not eradicate the poison. In the secondary symptoms, however, it is an admirable ally, superseding, by its certain efficacy, the exhibition of mezereon, sarsaparilla, and other vegetables of doubtful utility. Where mercury has been used, but cannot be pushed safely any further, the mudar rapidly recruits the constitution, heals the ulcers, removes the blotches from the skin, and perfects the cure. The only part of the plant useful in medicine is the bark of the roots; it should be gathered in the

* Medico-Chirurgical Transactions, vol. x., 1819.

months of March, April, and May. The bark stripped from the root, being well dried, is readily beaten into a fine powder, of which the dose is from three to ten grains, thrice a day, for an adult; six grains is enough to commence with. As the plant grows wild everywhere throughout Hindostan, it may be applied advantageously externally. I have often used a poultice made of equal parts of this powder and linseed dust, with decided benefit, in bad ulcers, from whatever cause, and even in gangrene it acts as a detergent in cleansing the sore, and powerfully stimulates the healthy granulations. Decoctions may often be employed where the stomach would reject it in substance. When it caused pain in the stomach, a few grains of magnesia or prepared kali added to each dose will prevent that effect. That this medicine is really the principal in the cure I have no doubt, for I scarcely ever succeeded by any means in curing or even checking the disease before I employed it, and have scarcely ever failed of doing both since."

The asclepias has been employed in combination with arsenic, as in the celebrated "Asiatic pills," the formula of which is as follows:—

Arsenici protoxydi, gr. iv.

Piperis nigri, oz. ix.

Asclepiadis giganteæ, radicis corticis, oz. iv. scr. iv.

The arsenic and black pepper are to be well rubbed together, at intervals of time for four days; the mudar and water are then added to form a mass, and the latter is to be divided into 800 pills. The dose of these pills is one twice a day, each pill containing $\frac{1}{16}$ of a grain of arsenic.

The mudar powder is also used in Hindostan in the form of an ointment, in combination with lard or spermaceti ointment.

The other vegetable remedy which has attained so high and apparently so deserved a reputation in the East, the *Hydrocotyle Asiatica*, is a plant resembling in appearance and ordinary characters the common hydrocotyle of the stagnant ponds of this country. The hydrocotyle asiatica is reputed to be specific in many diseases, particularly those of the skin, and useful in all cases of leprosy. Mr. Hunter, in his report to the Board of Health of Madras, in February, 1854, on fifty cases of disease of various kinds, of which thirty were cured and the rest greatly benefited, remarks that "the affections in which this medicine has been peculiarly efficacious are, ulceration, syphilis, and scrofula. Almost all cases of ulceration are cured with this remedy. Amongst the cures were several cases which had resisted other modes of treatment. This medicine may be recommended as an excellent stomachic and tonic. It appears to have a peculiar action on the capillaries of the mucous surfaces and on the skin; it causes at first a sensation of heat in the stomach, and at the same time a prickling in the extremities and then over the whole skin of the body, soon followed by an augmentation of appetite and transpiration, and a general improvement in the health."

M. Boileau, a physician of Mauritius, published an account of this plant, as a remedy for tubercular leprosy, in 1852; and M. Jules Lepine, of Pondicherry, in the *Journal de Pharmacie et de Chimie* for 1855, has given a further description of the plant, with a chemical analysis, pharmacology, and list of the formulæ used in the government dispensary at that place. The properties of the plant seem to be due to a peculiar vegetable principle which he names *vellarine*, from *vellarai*, a native name of the hydrocotyle. Vellarine is a thick pale-yellow oil, having a bitter and penetrating taste, which abides for some time on the tongue, and is most abundant in the roots, wherein it exists in the proportion of somewhat more than one per cent. Besides the vellarine there is a yellow oil, brown resin, green resin, saccharine extract, non-saccharine extract, and bitter extract; the latter, in the proportion of ten and a half per cent., is found only in the root. The fresh plant is slightly bitter and aromatic in taste.

The pharmaceutical preparations of the hydrocotyle are a powder of the entire plant, of which the dose ranges from one to six grains daily; a syrup, prepared from the juice, useful for children, the dose ranging from two drachms to two ounces daily; a tincture, the daily dose ranging from ten to forty drops; an infusion; an ointment of the green plant; and baths containing four pounds of the plant, either green or dried. Similar preparations are made from the root, and are much more active than those of the entire plant, the root containing, as already mentioned, the largest proportion of vellarine. Vellarine cannot, however, be employed separately, from its great hygrometric qualities and active tendency to decompose. Vellarine has also the property of volatilization at 212°, and the virtues of the plant are consequently destroyed by exposure to heat. For this reason, decoction and extract are inadmissible forms.

Dr. Marshall, of Bombay, has found nitric acid a valuable and successful remedy, exhibited in the dose of one drachm daily, diluted with a pint or a pint and a half of water. Of two hundred patients treated on this plan, more than one-third were cured, and the greater number of the remainder were greatly benefited.

(To be continued.)

ON POISONING BY THE ROOT OF ACONITUM NAPELLUS.

By F. W. HEADLAND, M.D., F.L.S.

THE plant which we call Aconite, or monkshood, is probably the same as the Aconitum, so interesting to students of classical literature as the poison which, next to conium, was probably in most extensive use amongst the nations of antiquity. Though the description given by the ancient botanist, Theophrastus, is not very distinct, Dioscorides describes several kinds of aconite, in one of which we seem to recognise our A. Napellus, which is still indigenous in the mountains and uplands of Greece: another is thought to be a species of Delphinium. He states that aconite was used in painful affections of the eye; that by its root scorpions were stupefied and rendered torpid, being again restored by hellebore; also that flesh poisoned with aconite was used as a bait wherewith to kill panthers, wild boars, and wolves.

The invention of aconite was attributed by the ancients to Hecate,—or it was believed that it sprang from the foam of Cerberus. The uses to which they put it were worthy of its fabled origin. It entered into the poisonous cup which Medea mingled for Theseus, and into the draught by means of which a barbarous law disposed of the old men of Ceos, when infirm, and no longer of use to the state. It was employed in secret poisoning, and Theophrastus states that the practisers of this art understood it so well, that while giving aconite they could at their pleasure prolong the life of their victim for one month, two months, or any fixed term. In the later days of Rome, this aconite poisoning became quite a fashion, as we read in Ovid—

"Imminet exito vir conjugis, illa mariti,
Lurida terribiles miscent aconita novercæ."

From the catalogue of ancient poisoners, history has singled out for especial infamy the name of Calpurnius Bestia, who was accustomed to dispose of his wives by means of aconite.

In the middle ages, also, the powers of aconite were well understood. Little as we are able to penetrate into the dark records of mediæval crime, there is scarce a doubt but that aconite was well known to the skilful poisoners of Italy, and formed at least one ingredient in the secret draught of the Borgias.

Matthioli states that a criminal was put to death by a drachm of the root. It was given in 1524 to two criminals at Rome; in 1561, to two others at Prague. Out of these four, two died. Dodonæus mentions five persons who ate the root by mistake at Antwerp. They all died. Mordus narrates the case of a man who was deranged by eating some of the leaves of aconite. The physician who was called in declared that the plant was not the cause of the disorder. To prove this, he ate freely of it, and soon after died in great agony.

The history of aconite poisoning in modern times presents at least one agreeable feature, when contrasted with what has been recorded of its use amongst the ancients and in the middle ages—namely, that it is generally, if not invariably, accidental.

Though I have undertaken to write only of aconite root, it is proper to mention that the leaves of aconite are also highly poisonous, as well as the flowers and the seeds, though these are all less active than the root. The leaves likewise differ from the root in being possessed of more acidity. This property appears to depend on a volatile principle which is not poisonous in its nature.

Willis records the case of a man who was poisoned by eating the shoots of aconite by mistake for celery. In this case mania preceded death. Dr. Turner tells of a number of Frenchmen who mistook the same shoots for masterwort, and nearly all of whom died. In the "Philosophical Transactions" for 1737, is the case of one John Crumpler, who ate aconite leaves in salad; and Haller mentions the death of a Swedish army-surgeon who