secured—viz., replacement of the head of the tibia; extension of the angle of the leg; and free muscular action during the period of treatment.

FIG. 2.

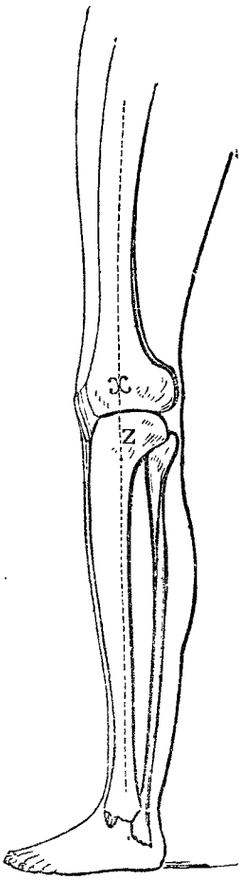


Fig. 2 represents the bones placed in their normal position, with the axis of the knee-joint restored, and each centre in its relative position.

FIG. 3.

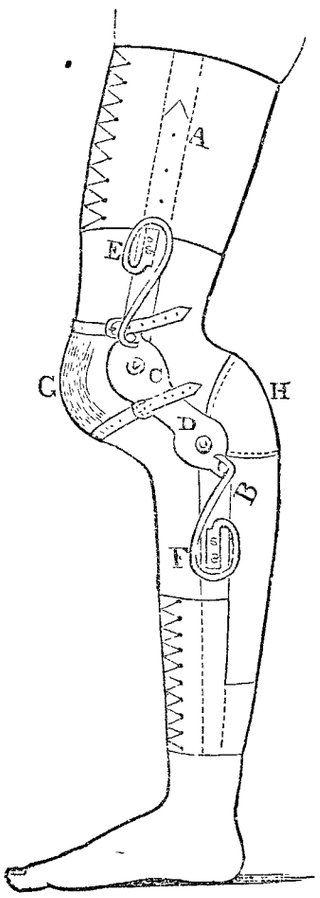


Fig. 3. A and B are three levers, composed of metal, corresponding in their direction to the perpendicular position of the femur and tibia.

C and D are two axes, placed exactly coincident with the centres of the articular ends of the bones.

E and F are two powerful springs whose action takes place in opposing directions, similar to the arrow-indicators in fig. 1. Thus F presses the lever B in an anterior direction, bearing the end of the tibia forward, whilst E presses the lever A in a posterior direction, bearing the end of the femur backward. As C and D are found acting above and below the actual axis of the knee-joint, they mutually influence the point formed by the apposition of the heads of the tibia and femur; and as it has already been explained that the femur really offers a fixed resistance, and the tibia moves beneath it, the head of the latter bone is turned anteriorly in a semicircular direction consequent on the upper centre (C) being a fixed point, and the lower centre (D) rotating around it.

G is an elastic knee-cap.

H, a padded plate.

When the ligaments are tense, there is a chance of pressing the anterior surface of the tibia against the posterior surface of the femur. This is readily obviated by having the shaft (A) made to elongate, when the centre (C) being a little lowered, pushes the lever (B) downwards, carrying the tibia with it, and thus separating the osseous surfaces of the joint.

Welbeck-street, Cavendish-square, May, 1856.

NOTES
ON THE
HISTORY, PROPERTIES, AND USES OF ACONITUM NAPELLUS.

BY ROBERT JACKSON, M.D.

THE following notes were drawn up, and the experiments made a considerable time since, when investigating the properties of aconite. Though some of the quotations are a repetition of what has recently been published in THE LANCET, I venture to send you the notes, such as they are, in the hope that they may direct further attention to poisoning by aconite.

From the earliest Greek poets we learn that aconite was sent as a scourge to the human race. From the same source we are told of its fabulous origin, springing from the foam dropped from the mouth of Cerberus in his struggle with Hercules, or from the corrupt matter flowing from the vulture's wound in Prometheus' body.

"Unde Prometheo de corpore sanguineus ros
Aspergit cautes; et dura aconita creat cos."

Pliny asserts that Hecate, the infernal goddess, being expert in the composition of poisons, discovered aconite. The Greeks make frequent reference to a most virulent poison, called ακονιτον; but this term appears to have been in the earlier ages applied to poison in general. Later, however, a plant growing abundantly in Heraclea, a city of Greece, near a place, or upon cliffs, called "Aconas," was from that circumstance called Aconite.

"Quæ quia nascuntur dura vivacia caute
Agrestes aconita vocant."—OVID, *Metamorphoses.*

Theophrastus, born 371 before Christ, is perhaps the first author who specially refers to or describes a plant called aconite. He gives two kinds, both growing like grass, &c. Dioscorides, a physician of Anaxarha, in the first century, also gives two species of aconite. The first—leaves, three or four, like the cyclamen or cucumber; stalks, a cubit length; root, like a scorpion's tail. The second—leaves like those of the plane-tree, but divided by deeper indentations; smaller and darker stalk, like the fern; height, a cubit or more; seed in pods, somewhat oblong, root of a dark colour, and representing the cirri of the animal called squilla marina.

Various names are accorded to aconite, either from its power or the fancy of observers. Dioscorides calls it Cammoron, from the cruel death it causes; Pardalianchus, pard or leopard-killer; Theripponon, or brute-killer; Cynoctonon, or dog-killer; Lycoctonon, or wolf-killer, hence wolfsbane; Napellus from its napiform-root; Cucculus monachi, monkshood, &c.

As early as 1544, considerable doubt existed whether the A. Napellus, then known, was the plant described by the earlier authors. Of the two species described by Dioscorides, the Pardalianchus and the Lycoctonon, the first is admitted to be very rare; of the second, it would appear three varieties were given; but owing to part of Dioscorides' work being lost, we are deprived of two of them, which two we are, however, told were much in use amongst "phisitions," while hunters used the other. Hermolaus and Marcellus testify to this loss. Bauhin in 1541, L'Obelius and Gerard in 1597, appear, however, to trace the Lycoctonon of Dioscorides, and Bœcler in 1729, Dodon, Sprengel, Woodville, and many others, appear to be agreed that the second species described by Dioscorides, the Lycoctonon, is the A. Napellus, wolfsbane, or monkshood of the present day.

A great many varieties of aconite are mentioned and described by different authors; and Haller curiously relates that in Poland, Russia, Lapland, &c., the A. Napellus is considered harmless; and Lucrisis even says it fattens geese and quails; while some varieties are said to be eaten as a salad in Sweden.

Aconite as a most virulent poison lacks no want of evidence. Upon scorpions its power is early mentioned:—

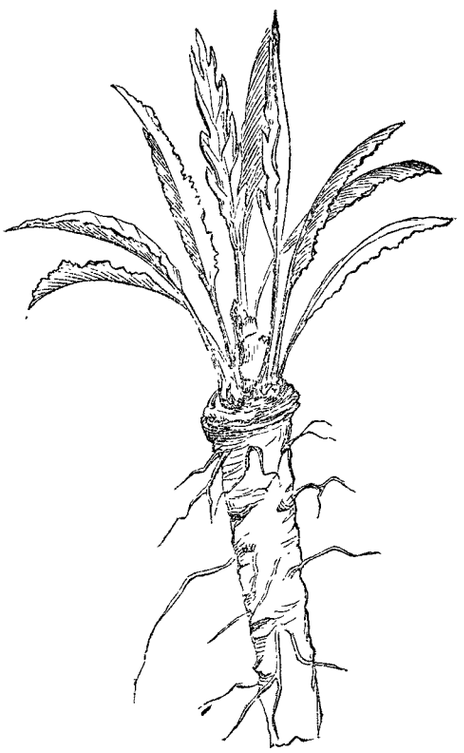
"Only the touch of choakpard, aconite,
Bereaves the scorpion both of sense and myte."

The huntsmen of the mountainous districts of Greece, simply by sprinkling the juice on their arrows, obtained a sure and rapid poison; and Pliny remarks that of all poisons aconite is the most rapid; and were it not for it, the countries infested by tigers, panthers, &c., would soon be overrun by them.

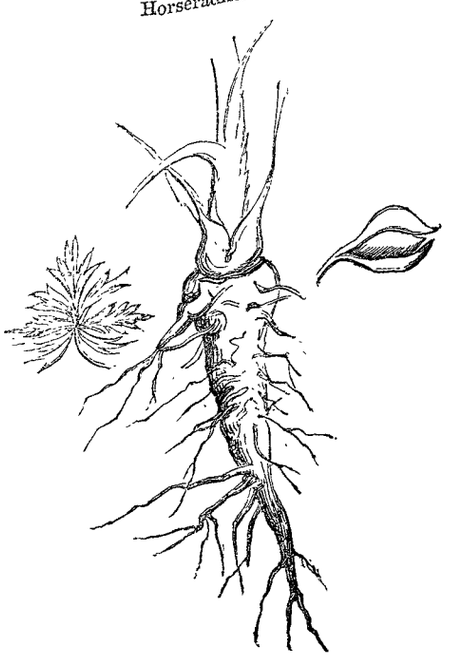
As a poison to the human race, we have also early evidence. Calpurnius Bestia was accused of killing his wives by aconite.

The tyrant Agatharchus killed many of his people with aconite. Theopompus mentions that Clearchus of Heraclea killed many of his guests by giving them aconite. This poison was also mixed in the fatal cup of Aristotle. The juice of aconite, we are also told, formed the poison cup presented to the old men of Ceos, when no longer useful to the state. Aconite was also used by many barbarous nations in poisoning the streams and wells of their enemies. Dr. Wallich states the attempt was actually made in the Nepal war, at Hotouura. Some authors assert that the plant is poisonous when held in the hand, and the effluvium from the full-grown flowers is said to be deleterious.

The symptoms of poisoning by aconite are fully detailed in the cases on record; and these cases have generally arisen from an overdose of the extract or tincture, or from eating the root in mistake for horseradish. The difference of the roots will at once be seen; still, to an uneducated eye, a sufficient resemblance certainly exists to account for the mistakes that have



Horseradish Root.



Aconite Root.

been made, especially if the roots have been dug up in winter, when the leaves have died down.

Horseradish belongs to the natural order *cruciferæ*. The root is long-shaped, fusiform, very gradually tapering, very difficult to be dug up entire; fleshy and succulent, with few fibres; has a light-yellow colour, and a peculiar and pungent taste.

Aconite belongs to the natural order *Ranunculaceæ*. Its root is napiform, or swelled above and tapering abruptly downwards; very short in comparison with horseradish; giving off many fibres. Colour of a dark-brown. Has a sweetish taste, soon producing tingling of the lips and mouth when eaten.

The distinguishing difference of aconite may be said to consist in its *short, napiform, fibrous, dark-brown root.* The leaves and flowers can never be mistaken.

The following cases abundantly prove the power of aconite:—

Willis mentions a case in which the chief symptom was maniacal delirium.

Morœus, a Swedish author, relates a case in which a man eating of the fresh herb became delirious. His surgeon, not believing in the power of the plant, ate of it, and died, while his patient recovered.

Plenck alludes to a man who died a maniac, a night and a day after eating of the tender leaves of monkshood. Another person, eating likewise of the same, was saved by vomiting; a third, however, died, after being comatose. Seven flowers of the A. Napellus, says the same author, killed a full-grown man.

Bœcler says, when the A. Napellus is eaten, the lips become swollen and inflamed, the tongue protrudes, the eyes swell and start, the body becomes livid, vertigo and convulsions are frequent, and death ensues.

Van Helmont speaks of its power of debilitating the mental faculties. In the *Medico-Chirurgical Review*, for 1837, a case of idiotcy is supposed to have arisen from eating the plant.

Mathiolus relates of four criminals who took the root, that two recovered, after much suffering, and two died. One of them took two doses of one drachm each, with an interval of an hour and a half; three hours after, he had great weakness and weariness, followed by convulsive movements of the mouth, eyes, &c., then stupor and death. The other, at the end of two hours, had vertigo, oppression of the brain, swelling of the body, livid and ghastly countenance, eyes protruding from their sockets, and death by horid convulsions.

Dodonæus narrates the death of five persons at Antwerp, who all died from eating aconite by mistake. Dr. Turner also states that several Frenchmen who partook of the plant all died in the course of two days, except two who were saved by vomiting. In the "Mémoires de l'Académie Royale des Sciences de Stockholm," three cases are related of the flowers being poisonous, one ending in death. Murray, of Gottingen, mentions three deaths by aconite in Sweden. Pereira relates the case of Mr. Prescott, who, with his wife and child, ate of the root, for horseradish. His chief symptoms were burning and numbness of the lips, mouth, and throat, extending to the stomach; vomiting, cold extremities, cold perspiration of head, eyes glaring, violent headache with trembling, lips blue, mind not affected, neither cramps nor convulsions; death in four hours. The wife and child recovered.

Two cases in the "Hortus Medicus", of Graves and Morris are given, where two men ate of the *boiled root:* one died in three hours, the other vomited and recovered. The symptoms in both began in a quarter of an hour: burning sensation in the throat, pains in the stomach, convulsive contractions in the face and limbs, and insensibility. The one who died became strongly convulsed, with continued distortion of the limbs and face, teeth and hands clenched, eyes partly closed, face of a livid purple, with white blotches.

— Smith (*Foreign Medical Review*) relates the case of a female who ate of the root: loss of power in the limbs, sickness, convulsions, and death.

Some leaves and a few flowers proved fatal to a child aged twenty-one months: death in seven hours. The root eaten by a child aged thirteen months: became sick, pale, pulse slow and intermittent, *pupils dilated*, stupor, pain in the stomach. Stimulants recovered him.—*Journal de Chem. Méd.*

In 1821, Widow Broscart, her son, and two others, drank of the tincture of aconite, prepared by mistake. Only one of these escaped. The others suffered great agony: sensation of burning in the throat and stomach, vomiting, diarrhœa, and violent colic; tongue as if getting larger, and death in about two hours and a half. The post-mortem in these cases throws little light on the subject. Some redness of the intestines and venous congestion existed.

The power of the alcoholic extract is well shown in the cases related, in the *Encyc. des Sc. Méd.*, April, 1839, by M. Pereyra. These cases were under medical treatment in the Hôpital St. André de Bordeaux. All had been taking the extract, which, being finished, a new supply was procured, but so powerful

that four grains killed a man in three hours. Another was much indisposed by taking two grains. The symptoms of another, who had taken five grains, were—burning sensation in the mouth, vomiting and convulsions, pain in the head, limbs icy cold, pulse slow and unequal. At ten next morning he was extremely pale, uneasy expression, *pupils contracted strongly*, heat in throat, &c. He recovered.

M. Bolardini (*Ed. Med. and Surg. Journ.*) relates that on the 11th June, 1840, twelve persons, suffering from skin diseases, swallowed each two ounces, six and a half drachms of the juice of monkshood, in mistake for that of scurvy-grass. An old man, aged sixty, was the first victim. His respiration became impeded, vomiting came on, and he died in a few hours. Two women were soon attacked with convulsions, prostration of strength, and paralysis; they both died in two hours. The other nine were all violently affected, but recovered by remedies. They suffered great prostration of strength of body and mind; pale and altered countenance. *The pupils of the eye were greatly dilated*; vertigo, headache, vomiting, pulse slow and feeble. The post-mortem of the three fatal cases showed effusion at the base of the brain, venous congestion, &c.

In the case related by Mr. Sherwin, in THE LANCET, the tincture produced fixing and protruding of the eyes, with *contracted* pupils, livid and rigid countenance, hands cold and pulseless, impeded breathing, &c. She recovered.

One drachm of Fleming's tincture has proved fatal. Twenty-five minims, in another case, caused paralysis in one hour; and death some time after. In another, fifteen minims caused much distress, loss of power, insensibility, &c., but the patient recovered.

Many other cases are on record of poisoning by aconite, and they terminate with the recent tragedy at Dingwall, where three out of five persons died from eating the root in mistake for horseradish. The symptoms are not well related; but burning of the mouth and throat were much complained of, and great suffering generally.

The effect of aconite on animals is in all respects similar to that on man. Orfila, Brodie, Pereira, Bonet, Haller, and others, relate their experiments, showing a train of symptoms similar to those observed in my own experiments, where, in death produced by the various preparations of aconite, and introduced into the system in different ways, the symptoms were agitation and distress, backward movements, paralysis, and loss of sensation, commencing generally in the hind legs, impeded breathing, foaming at the mouth (in cats and dogs), stupor, coma, convulsions, and death.

The following table will show at a glance the rapid action of the poison, and the difference in the strength of some of the extracts. The fresh juice of the root acted with the greatest rapidity.

Table of Poisoning by the different Preparations of Aconite.

No.	Preparation used.	Animal.	Introduced into	Affected in	Death in
1	7 grs. of Morson's extract	Rabbit	Stomach	½ minute; loss of power, &c.	3 minutes.
2	7 grs. own extract	Rabbit	Stomach	3½ minutes; fell on side	6 minutes.
3	7 grs. Smith's extract	Rabbit	Stomach	13 minutes; backward movements	2 hours.
4	2 grs. Morson's extract	Rabbit	Abdom. cavity	2 minutes; legs paralysed, &c.; gradually recovered	...
5	5 grs. ,, ,,	Rabbit	Abdom. cavity	¾ min.; affected; 7 mins., loss of power	8½ minutes.
6	10 grs. Smith's extract	Dog	Thorac. cavity	3 minutes; unable to stand	12 minutes.
7	6 grs. German extract	Cat	Cellular tissue	12 minutes; hind legs paralysed	4 hours.
8	10 grs. Morson's extract	Cat	Cellular tissue	15 minutes; legs paralysed	38 minutes.
9	20 grs. own extract	Cat	Cellular tissue	25 minutes; convulsions	54 minutes.
10	10 grs. Smith's extract	Rabbit	Brain	30 minutes; paralysed	60 minutes.
11	2 drops juice of leaves	Sparrow	Cellular tissue	5 minutes; paralysed	3 hours.
12	1 drachm tinct. of dried leaves	Cat	Rectum	4 minutes; uneasy, agitated, &c.	Recovered.
13	2 drachms juice of root	Cat	Rectum	5 mins.; paralysed; 14 mins., convulsed	23 minutes.
14	6 grs. German extract	Cat	Rectum	5 minutes; fell on side, &c.	14 minutes.
15	30 drops prepared juice of root	Rabbit	Jugular vein	Immediate loss of power, &c.	33 minutes.
16	30 drops, fresh	Rabbit	Jugular vein	Immediate loss of power, &c.	10 minutes.
17	80 drops tinct. of dried leaves	Rabbit	Stomach	Immediate loss of power, &c.	12 minutes.
18	80 drops tincture of seeds	Rabbit	Stomach	1 hour; loss of power; 4 hours, comatose	7 hours.
19	80 drops juice of root	Rabbit	Stomach	Instant spasm (tetanic)	2 minutes.
20	Ditto	Rabbit	Stomach	Instant spasm (tetanic)	1 minute.
21	80 drops prepared juice	Rabbit	Stomach	3 mins., paralysed; 7 mins., convulsed	12 minutes.
22	$\frac{1}{60}$ grain of aconitina	Rabbit	Cellular tissue	7 minutes; convulsed	16 minutes.
23	$\frac{1}{30}$ ditto	Rabbit	Cellular tissue	11 minutes; paralysed	19 minutes.
24	$\frac{1}{12}$ ditto	Rabbit	Stomach	Instantly paralysed	17 minutes.
25	$\frac{1}{16}$ ditto	Rabbit	Rectum	Drowsiness, &c.	Recovered.

In 13 of these cases, the pupils were noted:—in 5 *contracted;* in 8, *much dilated.* In some of the contracted cases, the pupils immediately dilated on death; and the *dilatation* was always more marked than the *contraction.*

The chief post-mortem appearances were in these cases, great engorgement of the right side of the heart, while the left side was empty. All the venous trunks were full of blood, and the appearances of asphyxia in general were present.

The experiments of Dr. Wallich with the A. Ferox, the Visha, Ativisha, Vish, Bikh, or Bichma, of the Indians, give symptoms similar to the above, but even in greater intensity and rapidity. He found the spirituous extract the most powerful; it produced difficult breathing, paralysis, vertigo, convulsions, *dilatation of the pupils*, and death. One grain of spirituous extract killed a rabbit in nine minutes and a half; two grains killed a strong dog in three minutes, &c. The post-mortem appearances were as above.

It will be observed that the symptoms of poisoning by aconite are very characteristic, and that in all its preparations it is a most deadly poison. The only variety in its action appears to be on the pupil. The observation of Briand (medico-legal) is quite borne out, "Les pupilles sont tantôt dilatées, tantôt contractées, tantôt dans l'état naturel." In Sherwood's case, the pupils were contracted, as also in M. Pereyra's case. In the child aged thirteen months the pupils were dilated, and in Bolardini's cases the pupils were greatly dilated. Dr. Wallich distinctly states that aconite causes dilatation of the pupil. Dr. Headland, in his recent paper, inclines to the dilatation, and my own observations lead to the same conclusion. In the case recently reported in THE LANCET by Mr. Bone, where the paymaster of the regiment was poisoned by the tincture, there was dilatation of the pupils.

Mr. Dansent, in a letter to the Editor of THE LANCET, in 1837, states that several preparations of aconite had considerable influence in causing dilatation of the pupils, in some cases reported by Dr. Turnbull, and were useful in functional amaurosis. Dr. Turnbull, however, thought this property depended upon the acridity of the preparation used; for when deprived entirely of this principle, he says it dilates the pupils. Geiger and Hesse state that when the active principle (aconitina) is "Portée sur l'œil, elle produit une dilatation de la pupil." The acridity referred to by Dr. Turnbull is probably caused by the aconitic acid also found in the A. Napellus.

In the Pharmacopœias of 1782 and 1788, formulas are first found for some of the preparations of aconite. Aconitina, the active principle, was first detected by Peschiez of Geneva, and

afterwards by Brandes; then in 1825 by Pallas, and by Geiger in 1832. These authors remark the extreme virulence of this substance; one-tenth of a grain killed a bird "avec la rapidité de l'éclaire."

The ancients were well aware of the use of stimulants in the treatment of poisoning by aconite: rue, horehound, opobalsam, chamæpitys, castor, pepper, garlic, wine, ammonia, &c., all are mentioned. One species, the A. Anthora, is said to be an antidote to the A. Napellus.

In later days, the same principle of treatment has been carried out, and after emetics, stimulants,—even carried to excess,—mustard to the epigastrium, and frictions, have been found the most useful.

The medicinal properties of aconite were early understood and used. Pliny and Dioscorides mention it as an anodyne for the eyes. Galen and Tragus assign a corrosive property to it. Melchion Friccius, of Ulm, used it in tertian and quartan fevers. Bœcler, of Utrecht, as a blister.

In 1762, Baron Stoerck introduced it as a remedy, and found it useful in scirrhus, pain of the joints, ulcers, intermittent and quartan ague, in gonorrhœa, in tic, rheumatism, &c. He gives many illustrative cases.

In Germany and Sweden, it has also been extensively used in rheumatism by Rosenstien, Blom, Odhelius, Ribe, and others. Foderé recommended it in the case of Charles IV. of Spain, in rheumatic gout. Sigmond and Walkins (THE LANCET, 1836–39) gave the extract in quarter-grain doses in deep-seated rheumatic affections. Dr. Gebel (*Med. and Phys. Jour.*) gave two grains, night and morning, in rheumatic cardialgia. Dr. Chandru (*London Med. and Surg. Jour.*) gave two grains of the extract, increased to twelve grains in articular rheumatism. Nysten (*Dict. des Sc. Méd.*) gave thirty-two grains of Stoerck's extract, with great advantage, in rheumatism and gout. Schultze, Vogel, Lombard of Geneva, Craigie of Edinburgh, all speak highly of its use in this complaint.

Skey gives illustrative cases of its use in tic, (THE LANCET, 1836–37.) M. Ribe and M. Delens also testify to its power in relieving facial neuralgia. Mr. Radley, (THE LANCET, 1836,) Dr. Burguess, (*Lond. Med. Gazette,*) gave it with great benefit in nervous headaches. Brera mixed aconite with hemlock and calomel in angina pectoris. In glandular obstructions, Bergius gave five grains of the extract every two hours; and Dr. Collins, of Vienna, has given half a drachm in the course of the day in similar cases. Aconite has also been given in syphilitic pains, by Borda; in phthisis, by Busch and Portal; in pneumonia, and in diseases of the heart, by Lombard; also in acute enteritis, from its supposed sedative action; as a diuretic, by Fouquiere; in many skin diseases, by M. Biett, Brera, and Professor Tommasini; in herpes, both internally and externally; in lepra, by Avicenna; inveterate psoriasis, by Dr. A. T. Thomson; in erysipelas, (THE LANCET, 1836;) by Klitton, of Wittemberg, with calomel, in some of the sequelæ of scarlatina; in amenorrhœa, by Dr. West, of Strasburgh; in various diseases of the eye, as opacities of the cornea, cataracts, &c., by Dr. Turnbull; by the native practitioners of Bengal, as a last resource in cholera.

It is probable the use of aconite will not extend beyond its employment in rheumatism and nervous pain, over which, when taken internally, or applied externally, it exerts a most powerful and beneficial effect, as the cases on record, as well as my own experience, fully warrant me in speaking in the most positive terms.

The tincture of the root, or the active principle, aconitina, mixed with lard, appears best suited for external application, and as such have been used with decided advantage.

The internal use of aconite as a medicine has not become general, owing, probably, to the uncertain action of its various preparations, which depends not only upon the part of the plant used—the age and mode of preparation of the extracts and tinctures—but, above all, upon the varying per-centage of the active principle, aconitina, yielded by different plants, some specimens giving *three times* the quantity others do. Aconite cannot, therefore, be extensively used till we have some certain and uniform preparation.

Notting-hill-square, Notting-hill, April, 1856.

ST. PANCRAS ROYAL DISPENSARY.—The labours of the medical staff of this institution have latterly become so onerous—as many as 7000 domiciliary visits being paid during the past year—that the governors determined to appoint two visiting-physicians, in addition to the ordinary staff; and on the 17th ult. Dr. Hullett Brown and Dr. L. Thudichum, the candidates chosen to fill these appointments, were unanimously elected.

CONCLUDING REPLY
TO
DR. TYLER SMITH'S "FURTHER OBSERVATIONS."

BY DR. HENRY BENNET.

FROM Dr. Tyler Smith's last "Observations," it would appear that the case seen in February is the only producible one on which his accusations against me are founded. It will be remembered that this case is stated to have been two years under my care at the Western Dispensary, *nine years ago*, necessarily for some severe morbid condition; that the pathological history of the patient during the many years that have since intervened has not been given; and that it has not been said what medical or surgical attendance she has received during that lengthened period—all very important points in estimating her present condition, whatever it may be.

Dr. Tyler Smith professes himself ready to accept my challenge, and to submit his case to a medical tribunal, but at the same time he thoroughly negatives his acquiescence by naming Dr. Robert Lee as a member of such tribunal. It would be a positively absurd for me to allow such a question, involving my professional character, to be solved by a physician who, however eminent, has shown in uterine questions, complete blindness, to say the least. Has not Dr. Lee, up to the present day, been unable to see ulceration? and has he not for many years thrown the entire weight of his scientific authority into statements which, if true, would have convicted me and those who hold the same views as myself of fraudulent misrepresentation.

Dr. Tyler Smith now accuses me of inconsistency, of receding from the ground first taken. The accusation is unfounded and untenable. Dr. Tyler Smith states, that *even to use* escharotics in the treatment of morbid conditions of the neck of the uterus, is "mutilation." My reply is, that such an assertion could only be made by one who, like Dr. Tyler Smith, has had no practical experience *whatever* of their use, and is in opposition alike to facts and to the received doctrines of surgical therapeutics. I maintain that there are morbid conditions of the cervix uteri, chronic inflammatory indurations, indolent ulcerations, suspicious sores and tumours, which, like similar morbid conditions in other parts of the economy, occasionally resist mere antiphlogistic remedies, and require for their radical cure more potent surgical agencies—viz., the mineral acids, potassa cum calce, or the actual cautery. In the immense majority of cases, these surgical means need only be used as vitality-modifying agents; and, when so employed with due care and discretion, leave no trace behind them: neither cicatrix nor other evidence of their use, beyond the removal of disease. There are instances, however, in which these agents may be legitimately used, and must be used, to destroy diseased tissue; as, for instance, in the treatment of cauliflower excrescences, or of other forms of suspicious but removable tumours springing from the cervix. In such cases, we ought not to be satisfied merely with the removal of the tumour, but to destroy, without hesitation but with care, the diseased surface from which it springs. In so doing we may, if successful, leave traces of the operation; but we have not mutilated the patient: we have simply saved her life. Mutilation, in its accepted scientific sense, implies, as I stated in my first Reply, "the unnecessary, unwarrantable destruction of organic textures." Thus interpreted, I can conscientiously repeat what I wrote on the 29th of March, that "I have been now many years in practice, and that hundreds of my patients, rich and poor, are disseminated throughout the length and breadth of the land, but that not one of them bears the trace either of *mutilation* or of destruction of the cervix uteri."

I may add, that I have only once amputated the neck of the uterus. It was in a woman who presented a malignant pedunculated tumour, involving nearly the entire uterine neck. I was able to entirely remove it with the portion of the cervix, from which it grew. The woman improved for a time, but then relapsed, and eventually died.

As regards the abuse of these surgical agencies in the treatment of morbid conditions of the neck of the uterus, I may claim to have been all but the very first to forcibly draw attention to its danger. In the third edition of my work, in 1853, two years before the publication of Dr. Smith's book, and again