but they were generally as ineffectual as if they had been applied to a dead body.

During convalescence, quinine was always administered, to the extent of six or eight grains of the disulphate daily; and the dietetic regimen required the utmost attention.

The foregoing essay was written in the early part of 1849, and presented to the Faculty of Medicine in the University of Glasgow, as a graduation thesis. On my return to Antigua in November of that year, I found that yellow fever was prevailing amongst the European troops to a most fatal extent; the surgeon and many of the men of the 54th Regiment having fallen victims. On this occasion, it was remarkable that the civilians, unconnected with the garrison, were entirely exempt from the epidemic. Indeed, the poisonous atmosphere appeared to be confined within very small limits, being confined to the Ridge, the chief military station, situated on the south-east part of the island, on a hill of 800 or 900 feet elevation, bounded by the sea on the east and south, and overlooking English Harbour and the Dock-yard on the west. The northern boundary is occupied by an extensive tract of uncultivated land, covered with thickets of brushwood. After a time, the troops were removed, and placed under tents at Monk's Hill, an old military post about four miles to the westward of the Ridge, and about the same elevation. It presents an abrupt precipice to the south, which shows it to be composed chiefly of trap breccia and conglomerate, capped by a stratified rock of a beautiful sea-green colour, containing crystals of angite and other minerals.* Here the disease gradually abated; but it was some weeks before the poison imbibed at the Ridge was entirely eliminated from the system, as cases occurred among the men daily for some time after their removal. One officer, who was on a visit to a gentleman in the neighbourhood of St. John's, fell under our care. He was bled by my son at the very onset of the attack, and treated with active mercurial purgatives and saline refrigerants and diuretics. On the third day he was convalescent, and taking quinine; the only symptom of disease remaining being a remarkably slow pulse. Another officer, a young Irishman of gigantic stature and robust frame, was seized whilst on duty at Monk's Hill. Having witnessed the speedy recovery of his comrade, he was most anxious to come to town to be placed under our care. At length the colonel yielded to his wishes, and he was conveyed in a four-wheeled carriage, accompanied by an assistant surgeon.

When I saw him, it was too late for general bleeding; but his intense headache, ferret-like eyes, and bounding pulse, induced me to have him cupped on the nape of the neck. This produced apparent relief; but the case was attended from the first with an obstinate diarrhoea, which resisted the use of calomel and opium, acetate of lead, and similar remedies. Nevertheless, he survived the critical days on which death usually occurs, and we began to entertain hopes that he might struggle through it, when suddenly he was attacked with delirium, the stools assumed the colour and appearance of black vomit, and he died on the ninth day.

A melancholy case occurred in the family of an engineer officer, who was about to return to England in the next steamer. He fled to St. John's with his wife and daughter, a young lady in the full bloom of health and beauty. A day or two after her arrival in the city, this young lady was attacked with the disease, and died on the fifth day.

Five artillerymen were removed to the barrack in St. John's on the 30th November. Next day two of them sickened; and the following day the three others. They were under the care of my friend Dr. Furlonge, who has published an account of them in the *Lancet* for 1850. One died on the fifth, and another on the seventh day; the rest recovered.

I have heard much during the last three years of the

successful treatment of yellow fever in Demarara by large doses of quinine and calomel; twenty-four grains of the former and twenty grains of the latter being the usual dose. This practice is so contrary to what I consider the rational treatment of ardent fevers, that I could not in my conscience adopt it in such cases. I might venture to try it in the congestive form of the disease; and perhaps that is the type most prevalent in the swampy colonies of Guiana.

Dr. Blair has had ample opportunities recently of testing the efficacy of this empirical treatment; and the profession may justly claim from him a report of his extended experience. It is to be hoped, also, that he will publish the result of another experiment he has been making, with the view of protecting individuals from the disease by administering belladonna as a prophylactic.

[From the length of Dr. Nicholson's paper, we have been obliged to omit some of the concluding paragraphs, which, however, did not specially refer to yellow fever. EDITOR.]

ON THE ARSENICAL TREATMENT OF CASES OF SNAKE-BITE.

By BENJAMIN TRAVERS, Jun., Esq., F.R.S.

IN the ASSOCIATION JOURNAL of the 2nd instant (p. 773), I read a communication on the subject of "Snake-Bite" which is not without interest, although it contains nothing materially in advance of several suggestions which had been previously offered in reference to the treatment of these cases.

I am familiar with the effects of the "adder's bite", having witnessed the successful treatment of two cases at St. Thomas's Hospital. They were both marked by rapid and diffused swelling from the wrist to the shoulder, such as I would call *acute oedema-tension* with a dull mottled or slightly livid hue, as contradistinguished from erysipelatous redness. In both cases to which I allude brandy and ammonia were very liberally administered; and the parts were kept constantly and thickly smeared with warm oil. In one of the patients, a young man, who was brought from the vicinity of Dulwich or Norwood, the depression of the nervous system was well marked for many hours: he was very sick, and drowsy almost to torpor, with a small, jerking pulse. There was little or no complaint of pain, but pressure or handling the part produced great distress. Very simple measures were adopted for the prompt relief of the bowels by injection. I am sorry that I am unable now to speak more in detail of these cases; but I retain a lively impression of the particulars to which I have alluded. Some years ago, a case of this description terminated fatally at St. Bartholomew's Hospital; and such of your readers as are conversant with the literature of our profession, will remember the interesting narrative of Sir Everard Home, of the fatal consequence of the bite of a rattlesnake, detailed in the *Philosophical Transactions* for 1830, and the later and equally fatal example of this accident, which occurred at the Gardens in the Regent's Park.

This subject has always been one of especial interest to me, in consequence of the great probability that we possess in arsenic a remedy which, if administered boldly and in time, will rescue the sufferer from an imminent and painful death. I believe no one has ever questioned the accuracy of the facts recorded of the comparatively certain operation of the Tanjore pill, and Mr. Ireland's cases, of which he enumerates five treated with unvarying success, are powerfully corroborative of Dr. Russell's statements. Mr. Ireland, on his arrival in the island of St. Lucie, having previously heard the facts concerning the efficacy of arsenic stated in Mr. Chevalier's lectures, proceeded at once to test the truth of the proposition, by administering one grain doses of the mineral (in the form of arsenite of potash, as it exists in Fowler's solution), every half hour until the patient began to revive. He treated five cases with perfect success

* This rock was mistaken by Dr. Chisholm many years ago for an ore of copper, and formed the basis of his theory of fish poison.—*Edin. Med. and Surg. Journal*, vol. iv, p. 393.

in this manner. The men severally took six, seven, and eight doses of the following form, before the irritating operation of the arsenic began to show itself by vomiting and purging. What is very remarkable, is the immediate and complete recovery of these patients, without the arsenic having produced any trace of its poisonous agency, or any subsequent ill consequences. Mr. Ireland prescribed as follows—

R. Liquor. arsenicalis 3ij.
Tinctura opii gtt. x.
Aqua menthae pip. ʒiiss.

to which was added half an ounce of lime-juice: the medicine being taken in a state of slight effervescence. The embrocations and clysters mentioned by him, cannot be regarded as having had much to do with the cure, but were no doubt useful in some degree.* On one occasion only did Mr. Ireland amputate the finger on account of the extent of the laceration. In the remaining instances he contented himself with paring the edges of the wound and dressing it superficially.

It is well admitted by most physicians that arsenic will cure chorea, if given in proper doses and for a sufficient time. Mr. Martin, of Reigate, and Mr. Salter, of Poole, have adduced abundant evidence of the great powers of arsenic in the cure of this disorder. Now, having a due regard to the condition of the nervous system in these two instances of its disturbance from such different causes, I think we must conclude that arsenic operates specifically and powerfully in that direction. Dr. Taylor tells us that it is not a corrosive poison, and although four or five grains have been found sufficient to destroy life, patients have recovered after taking sixty. Such a case is upon record; it was published by Dr. Roget. A grain of arsenic every half hour sounds somewhat heroically, but I should like to see this remedy tried in hydrophobia as Mr. Ireland used it to quell the effects of the snake poison. I think it may be shown that arsenic powerfully and specifically stimulates the semilunar ganglion and its tributaries presiding over the organic life of our bodies. Its "evacuant" operation is an incident of prime importance in cases of poison. It should always be given on these occasions until the patient vomits and purges abundantly.

I thank Dr. Powell for his valuable contribution to the Journal; but I fear he must assume or prove something in addition to the altered quality of the blood, before he will successfully explain the *modus operandi*, variable as it is known to be, of these subtle poisons. The nerves have their own extrinsic and peculiar properties and functions as well as the blood, and where their independent action is slighted or forgotten in the treatment of constitutional disorders growing out of local irritation, whether chronic or acute, grave errors of treatment will occur, and the practitioner's reputation will in such circumstances not always pass unscathed.

London, 8, Dover Street, September 6th, 1853.

CASE OF LARGE STRANGULATED INGUINAL HERNIA FATAL AFTER OPERATION.

By JOSEPH HINTON, Esq., M.R.C.S.

UNSUCCESSFUL cases, however unsatisfactory they may appear, often furnish us with a deeper insight into the disease, and hence I am induced to lay before the readers of this Journal the brief details of the following case.

CASE. W. H., aged about 45, a blacksmith, requested my assistance in May last. He had been for many years the subject of right inguinal hernia, which was irreducible; at various times he had while at work felt a fresh protrusion, with increase of volume in the tumour, and these attacks had generally been attended with severe pain, vomiting, etc. On these occasions, he had generally been able to restore the parts to their original size, that of a large foetal

head, by his own efforts. His habits of life had been very irregular, which his appearance bore out. On the morning in question, while at work, he felt a sudden increase of volume in the tumour, was soon suffering, and almost immediately vomited; he found that the hernia was nearly double its usual size, and it resisted all his efforts to replace it. I found that it occupied the whole of the scrotum, the penis (B) being nearly obliterated; in length, it could not have measured less than ten inches, whilst in circumference it must have been considerably greater, the neck being from three to four inches across; the whole tumour was tense, and somewhat reddish, especially at the lower portion, where there appeared, as it were, a second somewhat flattened swelling (A), the skin of which was glossy, and where there was also an indistinct feeling of fluctuation. I have endeavoured in the accompanying sketch to convey some idea of its size and appearance.

The abdomen itself was comparatively small, though rather tense; it was certainly flattened, but there was no tenderness on pressure; the parietes were loaded with fat.

During the day and the morning of that following, various efforts were made at reduction; but the careful employment of the taxis, cold applications, inclining the body on a board the lower part of the pelvis being elevated above the rest of the body, were alike unavailing. Opium in full doses checked the vomiting; several injections were given, but they produced no effect. Although in these old cases, there may be, as a general rule, less danger in delay, yet considering that he remained *in statu quo*, and that his general appearance became more anxious, I did not consider myself justified in postponing the operation. Accordingly, on the evening of the second day, he was placed under the influence of chloroform, and a last trial of the taxis in that condition proving unsuccessful, the operation was at once undertaken. My original intention was to have relieved the stricture without opening the sac; in this, I failed, not because this was within the sac, but because trusting to books, I was misled. The incision made (C) was about three inches in length, an equal portion being on either side of the neck of the hernia; the dissection was carried through a layer of fat, about three quarters of an inch in depth, until I arrived at a layer of membrane, which appeared like the sac, but which showed the bluish character which books assign to this membrane only in a very small portion; taking, therefore, a portion of this surface, which was dis-

* The very interesting narrative from which the foregoing facts are quoted will abundantly repay perusal. It occurs at p. 136 of the second volume of the *Med.-Chir. Transactions*, published in 1811.