mischievous in practice. The return of the hernia does not occur in the way described, nor is it the primary object of the taxis to "get the contents of the intestine out."

Strangulated hernia is an accident involving considerations, not mechanical only, but anatomical, physiological, and pathological. First, a portion of intestine is forced through the ring, together with a portion of omentum or mesentery, or both; the substance of the latter fills up the ring. Compression upon the veins is the next occurrence. The arteries, from their tone and elasticity, continue to pour blood into the tumour, which the veins cannot return, and the tumour increases in size from venous congestion, frequently without any further advance of intestine through the ring. This is the first stage of strangulation. In the second stage active inflammation ensues. In the third, sphacelus, produced either by the intensity of the inflammation, or more probably by the circulation in the tumour being at length wholly arrested by the compression of the arteries at the ring. Reduction of a hernia by the taxis in the first stage of strangulation is always practicable, though not always easy, and sometimes impossible, if conducted on the principles generally laid down. If the surgeon, supposing he must first return the portion of intestine immediately engaged in the ring, pushes and pulls, or kneads the tumour by a successive motion of the finger and thumb, he will seldom succeed in a tight case, even in this stage. And further, if he be intent only on "getting the contents of the intestine out," he will be apt to relinquish his efforts in disappointment after a short trial.

There is something to be done before either of these are attempted. The tumour is full of distended veins, the blood of which must first be returned very gently and patiently; not by pushing and kneading, and thumbing, but by gentle equable compression on all sides of the tumour, the abdominal and psoas muscles being previously relaxed. Now, it is evident that the venous blood, returning in obedience to the pressure of the surgeon's hands, through a very small aperture, *must needs return slowly*. If the tumour contain half a pint of blood, which is returned at the somewhat rapid rate of a drachm per minute, it will take sixty-four minutes to return the whole. Here, then, is a full hour's work to be done, and in the case of a very large hernia, it has been known to occupy two hours and twenty minutes, and two pair of hands, to accomplish this first step in the reduction! What, then, do surgeons mean by trying the taxis for a quarter of an hour, or *not at all*, operating on the moment, when they have the safe work of an hour or more before them? So soon as the venous blood is returned in any quantity, the sensible diminution of the tumour shews the practitioner that his work is done. It is as well to keep up the pressure to the end, but the peristaltic action will soon do the rest; the gas in the tumour rushes through the now more roomy ring, with the well-known gurgling noise; the solid contents next; and, lastly, the fatty portion, (omentum, &c.,) follow the returning bowel through the ring.

In the next stage, (that of inflammation,) the same practice carried out with yet more tenderness and patience, will generally accomplish the same result. In the third stage, (*sphacelus*), the operation may be necessary, but will rarely be successful. The symptoms of inflammation and sphacelus are sometimes obscured, and it is not my object to lay down any rule in these extreme cases, for or against the operation, but only to suggest a more eligible and successful mode of employing the taxis,—a mode which, after twenty-seven years trial, I have never known to fail; although I am by no means prepared to say it never will fail, or that the operation with the knife is never necessary.

Your correspondent will perceive that I differ from him in theory only by a shade, and that our practice is essentially the same. I see no objection (except where approaching sphacelus is to be apprehended,) to the application of cold, in conjunction with gentle, continued, persevering pressure; but I should prefer a previous trial of pressure, as an expedient often necessary on his own shewing, and in my experience always successful. Let no one, however, to whom these views may be new, run away with the notion that the reduction of a hernia, long strangulated, is supposed to be an easy or simple operation. Any man with a steady hand, who is familiar with the anatomy of hernia, can open the sac and divide the tendon. This is easily enough accomplished,—it is but *cutting* the Gordian knot; and yet, strange to say, a man who does this, often gets more credit, even with his brethren, than he who, superior in skill, can *untie* it! The *operator*, as he is called, is handsomely paid, but all the reward obtained by the man who reduces a hernia without risking his patient's life, is, perhaps, the transient gratitude of the sufferer, and a week's lumbago.

I am, Sir,

Yours respectfully,

THOMAS HUNT.

Herne Bay, December 18, 1847.

CASE OF AMPUTATION PERFORMED UNDER THE INFLUENCE OF CHLOROFORM.

By T. BERRY TORR, Esq., Surgeon, Barnstaple.

On Thursday afternoon last, (January 9th,) I was requested by my friend Mr. Clarke, of Lynton, to meet him on the following morning, in consultation on the case of a very old man, 87 years of age, named Thomas Bale, residing at a lone cottage at the higher part of the parish of Brendon, twenty-five miles from this town, who had sustained a most severe compound fracture of the left leg, produced by one of those huge blocks of stone, (so common in that locality,) weighing about a quarter of a ton, having rolled down on him from a steep declivity, and crushing his leg between it and another stone of considerable size.

On reaching the patient, in company with Mr. Clarke, on Friday, an examination of the injury too sadly proved that the account of it which had been given me

was by no means overdrawn. I found a most extensive laceration of the soft parts on the inner side of the leg, upwards of eight inches in length, through which the denuded fragments of bone were protruding in every direction; and on the outer side of the leg was a similar laceration six inches in length, attended with the same comminuted state of the bones. In this state of things it became our duty to point out to the patient and his friends, that not even the most remote chance of prolonging his life existed, save by recourse to amputation, which was willingly acceded to. Accordingly, having previously provided myself with a supply of genuine chloroform from London, we at once proceeded to administer it to him, on a plan which I somewhat modified from that used by Professor Simpson.

The desired, and it may fairly be said, truly astonishing effect, was produced in a little more than seven minutes; the patient after a slight twitching of the muscles, passing off into an apparently profound sleep. In this state we carried him from his bed, and placed him on a previously-prepared table in the adjoining room, without his evincing the slightest evidence of the pain, which under other circumstances he must unavoidably have suffered. The necessary preliminaries having been carefully adjusted, and the chloroform again applied for a few minutes, in order to ensure its full effect, I immediately proceeded with the amputation, which was performed in rather less than three minutes, Mr. Clarke, who rendered me very efficient assistance, and myself, being as much delighted as were the family astonished, at observing that at no step of the operation did our now unconscious patient shew any symptom whatever of enduring pain.

Shortly after we had replaced him as comfortably as possible in bed, he commenced being very talkative, would not believe his leg had been removed, and when questioned as to whether he had not felt pain, he replied, No, he had not felt any pain; he thought he had been asleep! He soon after this sang several snatches of a favorite old song!! And then passed into a most tranquil sleep, in which state we left him.

REMARKS.—From the ossified and diseased state of the arterial trunks met with in the stump, added to the patient's great age, the chances of recovering are of course sadly against him. Amputation below the knee was, however, the only plan of treatment which the *extensive* and *severe* nature of the injury would possibly admit of; and the desired anæsthetic effect of the new agent was certainly *most successful* and *complete*. One circumstance, however, which particularly arrested my attention during the process of securing the vessels, was the highly venous appearance of the blood issuing from the arteries which I particularly pointed out to Mr. Clarke; and I further remarked, that in proportion as the special effect of the chloroform passed off from the patient, the blood from the small muscular branches resumed its arterial character. The *modus operandi* of this truly astonishing, and (as far as the interests of humanity are concerned) certainly invaluable agent, has not, that I am aware of, been as yet fully explained, but if the foregoing remarks are confirmed by further observation, they would, I think,

lead to the inference that its effects are produced through the medium of a highly and perhaps peculiarly carbonized condition of the blood, acting on the sensorium and nervous system; and it will, therefore, be the province of further observation and experience to determine whether any and what degree of injurious influence may thereby be produced on the system, as to its restorative action so much in general required after the major operations of surgery; and whether such effects are calculated to overbalance the high *desideratum* of, as it were, annihilating human pain and agony on such occasions.

TWO CASES OF DELIVERY UNDER THE INFLUENCE OF CHLOROFORM.

By HERBERT W. BUDD, Esq., Surgeon to the City Gaol, Worcester.

Case 1.—January 23, 1848, I visited Mrs. Price, aged 27, in labour with her third child, at a quarter before five, a.m. Her pains commenced at eight o'clock the preceding evening, were very frequent and wearing, about every three minutes, and had been thus nearly the whole night; pulse 80; os uteri dilated to the size of a crown-piece; the head of the child had entered the cavity of the pelvis; complexion florid; of spare person. Three days ago she had a severe fall on the back, and since that time has had a constant cold weight in the bowels, and has not felt the child. Complains much of her back. On my naming the advantages of chloroform, she entreated me to use it.

Half-past five, a.m. I administered fifteen minims by means of a sponge. In less than a minute she seemed to be comfortably asleep, though easily roused. She had several pains, with intervals of three or four minutes, without feeling them; afterwards she had several in the natural state, which she said were much deadened. The parts became more relaxed, the uterine action not at all diminished in power or frequency. In the intervals she seemed to be asleep.

$\frac{1}{4}$ to 6 o'clock 15 minims, with the same results.

$\frac{1}{4}$ past 6 " 15 " "

$\frac{1}{4}$ to 7 " 15 " "

Seven o'clock, 30 minims. The membranes gave way under a very strong expulsive effort, and a large quantity of liquor amnii escaped. The head immediately pressed on the perineum. Quite unconscious.

10 minutes past 7. 30 minims.

20 minutes past 7. The child was born, and from its appearance had been dead some days; much swelled. In from five to ten minutes the placenta came away with facility, and the uterus contracted firmly. She became conscious a few minutes after the birth of the child, and assured me she was quite ignorant of its having been born. She said, "I have been in another world." She felt no pain on the expulsion of the placenta, although quite sensible. I think it right to add, that the passage of the shoulders was very tedious, and I was obliged to give considerable assistance in their delivery, although the throes of labour were very strong.