ing the usual state of vaccine fever on the tenth day—the proof of constitutional influence: and there is present, at an earlier but uncertain time, fever of a morbid character—the fever of constitutional irritation, developed by the local agency of the animal poison introduced into the arm. Again, it follows from the preceding, that our patients' minds should neither be disturbed by fears, nor lulled into overweening confidence by assertions of their enjoying a perfect immunity from the attack of small-pox.

Neither vaccination nor revaccination can afford this: its true position is, that it affords a perfect security against small-pox in the majority of cases; and that, in the other, it so mitigates the severity of the attack as immensely to diminish the rate of mortality, and to render it generally a very safe disease.

Gentlemen, I will bring my observations to a close, by asking your attention to the supposed, and perhaps, to most persons, satisfactory proven identity between small-pox and cow-pox. The facts adduced by Mr. Ceely in support of this conclusion appear so strong as to be irresistible, and yet we know that they have failed of producing conviction on the mind of a great authority in these matters. We may, perhaps, find an apology for this discrepancy, by the different route each has pursued in arriving at their respective conclusions: the one has made experiments on the cow, the other has reasoned upon the phenomena of the two disorders, as constantly presented to his notice.

It has been said, that this is adducing only opinions against facts; but this is inaccurate,—it is adducing one series of facts against another series of facts; and the question in dispute is not the facts, or the veracity of the observers, but how far one series of facts may be relevant to the other series of facts.

Admitting, therefore, the force of Mr. Ceely's facts, I am anxious to claim your attention to a series of counter-facts, not for the purpose of throwing discredit upon the former, but only in the hope of securing yet more attention to the subject, in the expectation of arriving at the whole truth—the only point on which the scientific mind can rest in peace.

This series of facts consists in the different periods of incubation required for the two maladies; in the marked difference of the origin, progress, maturity, decline, and termination of the respective vesicles; in the total difference of the cicatrix; in the constitutional influence produced by the mildest case of small-pox, and the severest case of cow-pox; in the different degree of after-susceptibility to the contagion of small-pox; and in the apparent impossibility of communicating vaccination to one who has previously undergone variola. With regard to the other fact, I speak hesitatingly—I have not been able to effect it; but my number of experiments has not been sufficiently large to enable me to speak positively.

With these facts before us, we should not think harshly of those who doubt, and are anxious to withhold their full assent to Mr. Ceely's hypothesis, till a new series of facts shall show the relevancy, or explain the seeming contradiction of those which I have had the honour of bringing before you.

And now, abandoning conjecture, let me take

leave of you this evening, by the practical suggestion of always employing eighth-day lymph: my opinion is, that the great cause of failure in the protecting influence of vaccination is the want of attention to this circumstance, and allowing to pass as satisfactory the imperfect and spurious arms which are the consequence.

July 29, 1841.

CASE OF STRANGULATED INGUINAL HERNIA.

REDUCED BY SUBCUTANEOUS DIVISION OF THE STRICTURE.

By Dr. JULES GUERIN.

(Read before the Academy of Science, August 2, 1841.)

BERTRAND FERRE', eighteen years of age, apprentice to an apothecary, is affected with right inguinal hernia, which appears to be congenital, although the patient says that he first noticed it about a year ago. When five or six years old he had hydrocele, and the tunica vaginalis, as well as the tunics of the cord, remained swollen ever since. In the month of August, 1840, while carrying a heavy burthen, a small tumor formed suddenly in the right groin; it came down whenever any efforts were made, and returned when the patient assumed the horizontal position. A medical man, who saw the patient at the time, assured himself by examination of the existence of hernia, and advised a truss to be worn. This advice was neglected by the patient, who came to Paris in 1841, and engaged himself to an apothecary at Passy. The tumor became gradually larger, and on the ninth of July last, while the patient was making some effort, it suddenly became as large as a hen's egg, and ceased to be reducible. On the tenth, after walking about a good deal, the patient felt a good deal of pain in the part, and consulted Dr. Barraud of Passy, who decided that the hernia was strangulated. Several efforts were now made to reduce it without success, and I was called in on the 12th; the following symptoms were then noted: hard tumor, as large as the fist, descending from the right groin to the testicle; it was evidently enclosed in the tunics of the cord, and could be traced some way into the inguinal canal; the tumor was painful, and the hard, peculiar feel led me to think that it was composed chiefly, if not entirely, of epiploon; the skin covering it was red, and very sensitive; there was, however, no nausea, vomiting, hiccup, or general symptom.

The patient had not evacuated for three days; a clyster was thrown up, which produced several stools, without reducing the size of the tumor in the least. The patient was then kept for three hours in a warm-bath, and the taxis applied, but without avail; I therefore decided, after having consumed eight hours in useless efforts at reduction, to perform the subcutaneous division of the stricture; this was done on the evening of the 12th.

Having prepared everything in the usual way, I pinched up a transverse fold of the skin from the root of the scrotum, and drew it up over the external ring; I then made a puncture, with a narrow bistoury, on a level with the ring, and passed a director through the puncture into the inguinal

canal, along the upper and anterior surface of the neck of the hernia; after some time I succeeded in passing it into the canal about two inches and a half. I next made another small puncture just above the former one, and through this I introduced a convex, blunt-pointed myotome, with a very small blade; the latter was directed upwards and outwards, along the groove of the director, and with it I divided gradually the anterior wall of the canal, making pressure with the index and forefinger over the parts that I wished to divide. In this manner I penetrated as far as the internal ring, and then attempted to reduce the hernia, but found that some portion of the external ring remained undivided. I now introduced a smaller myotome, concave and probe-pointed, and easily passed it between the ring and the neck of the hernia; on pressing up the tumor, it now passed readily through the external ring, but the reduction was only apparent, as the contents of the hernia were lodged in the subcutaneous wound, and did not pass beyond the external ring; I therefore reintroduced the myotome and divided the internal ring in two places, from below upwards and transversely from within outwards; the hernial tumor was now reduced with the utmost facility in a few minutes. The openings were closed with small pieces of plaster and firm pressure made over the canal, with compresses and a bandage.

Although the patient had been much fatigued by the efforts at reduction, which had been continued for so long a time, he fell asleep an hour after the operation; no untoward symptom of any kind manifested itself, and on the eighth day the patient was allowed to walk about.

Remarks.—It may appear premature to decide how far the subcutaneous method may be applied to the treatment of strangulated hernia, yet if we may be allowed to reason *a priori*, and from the experience of a single case, the following principles appear to merit the attention of surgeons. In the first place we may affirm, that the subcutaneous operation is applicable to cases of strangulated hernia, where we have reason to believe that the stricture does not exist at the neck of the sac, and that the intestine is free from gangrene. The objections urged against this method of operating, are its difficulty and uncertainty, and the danger of wounding important parts, as the intestine, arteries, or spermatic cord. The difficulty and uncertainty of the operation, however, cannot be fairly urged as insurmountable objections; they apply equally to any subcutaneous operation, and have been urged especially against the subcutaneous division of the recti muscles for the cure of strabismus; but the objection exists rather in theory than in practice. M. Guérin has operated with perfect success in more than seventy-five cases of strabismus, by dividing the muscles *underneath* the conjunctiva, and is therefore entitled to affirm that the difficulty and uncertainty of the operation exist only in idea. But it may be said, the danger of the operation must increase according to circumstances; thus, although there may be little risk when the sac contains epiploon only, it is quite different when a portion of intestine is strangulated. This is certainly true, but can it be adduced against any operation, the object of which is to save the patient's life? Besides, by following M. Guérin's instructions, the operation is as safe, when performed by subcutaneous incision, as it is

by the common method. The great difficulty is to find the external opening of the canal through which the hernia has descended, for when this is done, it is very easy, by drawing the neck of the sac a little, to pass a director between the sac and canal. These remarks, be it remembered, apply to cases where it is not necessary to open the hernial sac.

The intestine is not in greater danger of being wounded by this method, than by the common one; the blunt-pointed bistoury being guided by the director, can only injure the same parts that are exposed in the common operation, viz. a portion of intestine which may get entangled in front of the blade, and the neighbouring arteries. We can avoid the intestine by drawing down the neck of the hernia, and thus extending it on the director, and as for the arteries, they are just as much exposed to injury by one method as by the other.

We may now ask, how can the operator decide that the seat of stricture is in the hernial canal or at the ring, and not at the neck of the sac? How can we be certain that the intestine is not in a state of gangrene? The following general rules may serve as a guide upon these points:—

1. In cases of strangulated hernia, where the latter has not been reducible, the stricture does not occur at the neck of the sac.

2. When small hernia, which have been previously reducible, become strangulated, the stricture usually occurs at some other point than the neck of the sac, unless the latter has been lacerated.

3. In cases of large strangulated hernia, where the contents have been reducible, or where the hernia is an old one contained in the tunica vaginalis, the stricture usually occupies the neck of the sac.

4. In old irreducible hernia, strangulation generally occurs at the neck of the sac.

But though we may admit that several exceptions to these rules may occur, and that strangulation may exist at the neck of the sac in certain cases where it was not foreseen, the greatest inconvenience that can arise, is the having employed an innocent operation uselessly; the same objection will hold good against the taxis, and all preliminary attempts at reduction. As for gangrene of the intestine, we may remark that when the surgeon employs the taxis, &c., he does so at the risk of reducing a gangrened intestine, and in this respect the subcutaneous operation is not more dangerous.—*Gaz. Med. No. 33.*

ON THE USE OF OPIUM IN STRANGULATED HERNIA.

By A. W. DAVIS, M.D., Presteign.

(Read before the York Meeting of the Provincial Medical and Surgical Association.)

THE internal use of opium to aid in the reduction of strangulated hernia, not being, I believe, part of the general practice usually resorted to, I beg leave to mention an instance in which its employment was successful, and which came under my own observation.

I was at the house of an eminent surgeon in this neighbourhood, when his assistant arrived