great measure to the introduction of punctum probes through the stricture, carried to that part through the lachrymal ducts and sac. The principal objection to this plan would appear to be, that, if the probe is large enough to dilate the contracted duct, it would render the puncta through which it must pass, patulous from over-distension. Mr. Travers, however, has found this mode of treatment successful, and it is far preferable, if efficient, to the introduction of either styles, tubes, or fiddle-strings; and now you may ask me, does your own plan always succeed in curing a strictured duct and fistula lachrymalis? I answer, that fistula lachrymalis, if not of such long standing as to present a permanently cicatrised aperture, will yield to my remedy as soon as the passage through the nasal duct is opened; but I can no more be sure of permanently curing an established stricture in the nasal duct, than I can of insuring a perfect cure and immunity from a future return of the complaint, in cases where I relieve a patient from stricture in the urethra; but this advantage I gain from dilating the canal in the way I have mentioned, viz. that by treating any return of the disease in its commencement, I prevent the necessity for disfiguring the face, and putting the patient to the inconvenience consequent on the wearing of a metallic instrument in his nose for an indefinite period; and by passing the bougie two or three times, I can establish the continuity of the canal, so as to keep the sac empty, and prevent those serious consequences which arise from its over-distension and consequent inflammation. In some cases I have not met with a return of the disease; in most others, the occasional introduction of an instrument, sometimes at very distant periods, has been necessary, and may not the same be said of stricture in the urethra?

OBSERVATIONS ON REVACCINATION.

By H. NEWNHAM, Esq., Farnham.

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

It will readily be admitted, that the science of medicine is one of observation; and that we shall arrive at beneficial results, in proportion to the number of observations, and to the degree in which they have been compared with others, taken at distant places, at different times, and under varying circumstances.

It will also readily be conceded, that these observations will be valuable only in proportion to the accuracy, and mental calibre, and freedom from prejudice of the observer. And still farther, it will be granted, that on the subject of vaccination much remains to be learned,—and probably much to be unlearned, which has been hastily assumed, and too broadly stated as a fact, whereas, perhaps, it has been only an opinion,—received from the inaccurate or limited views of those who have preceded us, and which has been handed down to futurity, without investigation, and in the absence of sufficient authority.

Without arrogating to myself any superiority over others, I shall yet venture to impugn the correctness of observation of some who have gone before, and the consequent validity of their conclusions. My remarks this evening will be

confined to the subject of revaccination, on which question serious errors appear to be entertained.

First, as to the results expected from this process:

Secondly, as the nature of the appearances consequent upon revaccination; and,

Thirdly, as to the protective influence exerted over the constitution by a supposed renewal of the prophylactic agency of cow-pock.

I. As to the results generally expected from revaccination. This expectation appears to consist in a renewal of the protecting influence of the first vaccination, which by the supposition has been gradually waning, and would, if unrenewed, leave its subject ungarded from the infection of small-pox.

It will be seen upon reflection, that this result is entirely assumed: for it is assumed in the first place that the protective influence of vaccination diminishes in proportion to the distance of time from this first process; and, secondly, that the party so revaccinated is rendered more capable of resisting the variolous infection than he was before.

It will, perhaps, be said, that these are not assumptions, because it has been observed that the greater number of instances of small-pox, after vaccination occur at a considerable interval from the date of such vaccination; and that the revaccinated, resist exposure to the contagion of small-pox. The former of these arguments is untenable, because the fact, if granted, is sufficiently and better explained by the greater liability to exposure during the busy, active years of life, than during the comparatively secluded periods of childhood and youth. And, with regard to the latter argument, it is gratuitous assumption, because it never can be shown that the revaccinated are not among that greater proportion of individuals who, by vaccination, are rendered fully capable of resisting, now and for ever, the impression of variolous infection. Again, the frequent repetition of vaccination is contrary to the usual laws of the constitution in the case of all other specific diseases: small-pox, measles, scarlatina, hooping-cough, &c., do not occur frequently during life in the same constitution. When these maladies have been once received, the constitution, as a general law, remains insusceptible of a second attack; and where cases do occur, they only form that exception which, according to logicians, confirms, not invalidates, the general rule to which they form the exception. It is perfectly true that secondary cases do occur; and, particularly in reference to small-pox, it is well known that a local agency may be produced by the poison without any constitutional influence. In this respect it greatly resembles vaccination, as we should have been prepared to expect by *a priori* reasoning, which seems to point out the great similarity, if not identity of origin, of the two diseases. Reasoning upon the subject, therefore, would induce a doubt as to the supposed efficacy of revaccination; and I shall hope to show, in the sequel, the impossibility of renewing its constitutional influence, except in that small number of cases which form the exception to the general rule, and not the rule itself.

II. This brings me to the second branch of my subject, viz. the nature of the appearances conse-

quent upon revaccination. These have been referred to two classes; first, to, those who have resisted the process altogether, and who have been therefore supposed capable of resisting the various infection: and, secondly, to those who have passed through the vaccine disease a second time.

Here again there are two sources of fallacy. It is assumed that the former have resisted vaccination, and are, consequently, capable of resisting variola; whereas the simple fact is, that the arm has not taken, and a second or a third application of vaccine lymph will often prove successful, and demonstrate my assertion, that this alleged fact proves nothing more than that the operation has not been successful; and that no just inference can be drawn as to the security of the patient. With the other and larger proportion of individuals subjected to revaccination, it is said that they have had the vaccine disease a second time. But I venture to assert that even this is assumed; and that a second regular appearance of vaccinia occurs only as a very rare phenomenon,—the exception to the general rule, or the consequence of imperfect early vaccination. For the general progress of the revaccinated arm is always anomalous—always differing from the regular history of the vaccine vesicle,—varying in intensity, according to the age, constitution, and habits of the patient—according to the method of vaccinating, and the age of the lymph employed—but still invariably anomalous; the result of the local agency of the poison, in a constitution which has been rendered insusceptible of its normal or medicating influence by the first, regular, and complete vaccination. I must here appeal to the accuracy of the observer, and I will fearlessly ask, if ever he has seen a revaccinated arm assume appearances with which he would have been satisfied as the phenomena of a first genuine vaccination? But if not, the reasoner is reduced to the choice of one horn of the following dilemma—either that we are in error as to what constitutes a regular vaccine arm, or that the boasted sufficiency of re-vaccination is untenable.

It has not fallen to my lot to be able to practise revaccination upon a very large scale, but I have attended closely to the results of several hundred cases; and if there be any truth in the maxim, *ex uno disce omnes*, there will surely be more truth in the enlarged premises derived from the amended maxim, *ex plurimis disce omnes*; and there will be presented some claim to attention, from the unvarying results of a comparatively small, but still not insignificant number of experiments.

In consequence of the occurrence of variola in the neighbourhood of Elvetham-park, I have lately revaccinated eight children and twenty-eight grown persons of different ages; in—1st, five children and fifteen domestics; 2nd, three children and seven domestics; 3rd, one young lady and five servants; making together thirty-six individuals of all ages. In all these cases, the results most carefully noted every second day have confirmed my preceding experience; one only out of the thirty-six has presented anything approaching to a regular arm—a nursery girl, aged 19; she was vaccinated when a child, and seems to present a well-formed cicatrix. Even in this one, had it been a case of first vaccination, I should have called it an unsatisfactory arm, and should have

told her of the necessity for a subsequent vaccination at a somewhat distant period. In the remaining thirty-five, the following anomalous appearances have been more or less observed, and it should be remarked that these results of my antecedent experience were publicly stated two years since, in the *Retrospect of the Progress of Surgical Literature*, read at the Anniversary Meeting of the Southern Branch of our Association, then held at Portsmouth, and from the printed report of which I now quote:—

“In the instances which have come under his notice, the local action has been observed much earlier than it ought to be, and in some cases has subsided without further mischief; in others, a vesicle has been soon formed, with an undefined, ragged border, surrounded from the first by an inflammatory blush, always wanting the defined circular edge of the genuine vaccine vesicle, and attended by intolerable itching; much, too much local action has been produced; there has been almost always swelling of the axillary glands, which is unusual in a first vaccination, unless the lymph has been too aged; there has arisen a much higher and a much earlier state of constitutional irritation, originating and ceasing at very uncertain periods, governed by the local cause, and often leaving a sore arm with protracted swelling, and a flattened, undefined, misshapen, too light coloured crust, instead of the regular, raised, and well-defined chocolate-coloured scab.”—p. 9.

This brings me to the third subject proposed, viz. the protective influence exerted over the constitution by a supposed renewal of the prophylactic agency of cow-pock. It is here that error may be of so much consequence; it is here, therefore, that our conclusions become all-important. If it be asserted that the protective influence of vaccination becomes enfeebled as time recedes from that process, and that the security it affords is exhausted in seven years, while, again, it is renewed by a septennial recurrence to vaccination; and yet, if these assertions be incorrect, it is evident that we produce unnecessary apprehension in the minds of our confiding patients on the one hand, or an ill-founded security on the other. And since it has been shown that this gradual wearing out of the protective influence of a first vaccination is at variance with all the other analogies of nature; and that it is not supported by the experience of facts, which may not be better accounted for upon another and an obvious principle; and since we have no sufficient ground for believing that revaccination does produce a renewal of the anti-variolous resistance; but that, on the contrary, experience teaches us the impossibility of reproducing a genuine vaccine arm, but in the very small number of cases which form the exception to the general rule: it follows,

That the only position of re-vaccination is as a test of the constitutional efficacy of the first process; and that this test does not consist in there being no result from re-vaccination, which proves only that the arm has not taken, but in the more or less local anomalous appearances produced, without the usual constitutional influence.

There is no contradiction between this remark and the former assertion, that the constitutional symptoms were often most severe in the re-vaccinated: both assertions are true: in the latter class of persons, (i. e. the revaccinated,) there is want-

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