would relax for a moment, but the slightest touch upon the surface, or an attempt to present anything to his mouth, seemed to redouble their violence. No effort had been made to procure emesis, nor did that seem practicable, as deglutition was out of the question, and the violent convulsive movements precluded the possibility of effecting it by mechanical means.

Chloroform was at once administered by inhalation, and freely applied to the spine. The inhalation was somewhat difficult at first, but as he came gradually under its influence the spasms subsided, and in ten minutes he was perfectly quiet. On suspending the remedy the convulsive symptoms returned, but yielded again as it was resumed. Partial anæsthesia was kept up for about four and a half hours, when it was discontinued without any return of the symptoms. No other remedy was used, save an occasional dose of sulphuric ether, with brandy and water. The boy recovered rapidly, complaining for a few days of a slight headache and a feeling, as he expressed it, as though he had been intoxicated.

The poison was put up in a small paper, and, as it was thought a large dose of morphine, it was divided, and one half administered. The remainder weighed nearly *two grains*, which was probably about the quantity given. It had doubtless been administered some thirty or forty minutes before medical aid was obtained. An unusually large amount of chloroform was inhaled, but from the necessarily wasteful manner in which it was applied, we could not determine how much.

H. O. JEWETT.

Cortlandville, N. Y., June 10th, 1857.

VACCINATION.

BY L. A. SMITH, M.D., NEWARK, N. J.

I HAVE recently looked over the proceedings of the late meeting of the Medical Society of New Jersey, and the interesting address of the President on re-vaccination, and have amused myself in jotting down my own experience, which I send you.

I was vaccinated in 1810, and had a moderately sore arm, from which matter was taken to vaccinate others. My first exposure to smallpox was, as far as I know, about twelve years after, when I had commenced the practice of medicine, and from this I escaped. At that time I vaccinated my first child, and re-vaccinated my wife and myself. With me the virus took but little effect, and soon passed off. My wife had a pustule not unlike other vaccine pustules at first, but more readily forming a scab, which was gradually enlarged to the size of a shilling, and was a long time in healing. This effect I have often noticed since, in other patients. She was vaccinated when an infant, in the year 1802, by the late Dr. Abram Clark, of this city, and, I have heard the

doctor say, was the first person vaccinated in this State; and that he obtained the virus from Dr. Benj. Waterhouse, of Cambridge. My child, vaccinated at the same time with myself and wife, had the kine-pock perfectly, as did several other children, proving the purity of the virus. Two years afterward, having occasion to vaccinate my second child, I re-vaccinated all the members of my family. The infant took the disease and passed regularly through it. All the rest of us escaped with a slight local inflammation for a few days. I pursued this course in my family at intervals of two to four years, till all of my children, six in number, had passed the ordeal, and all, in my opinion, were secure against smallpox. Some of them had small pustules, and in one instance a bad sore, which was long in healing. To prove that the vaccination has not worn out, I have only to state, that I am very frequently attending smallpox, and that my son, the second in the list above mentioned, has been seven years in the practice of medicine, and has been often exposed to smallpox in its most virulent form, among the poor of the city, as Ward Physician, and we have both escaped.

That vaccination disarms smallpox of its virulence, reducing it to the mildest form of varioloid, even after the contagion is in the system, has been verified in my experience in no less than four instances. In all of them, I knew the patients must have been thus exposed for some days, one six, and by vaccination they all passed safely through the disease with but little fever and short confinement, and fewer pustules than I have ever seen in any other case of varioloid.

From my experience thus stated, in part, I have formed the following opinions:—

1st. That a *perfect* vaccination affords a *perfect* protection from smallpox, during life, and that if this be done in *all instances* soon after birth, smallpox may be *eradicated*, as Dr. Jenner supposed it would be.

2d. That in many subjects *one* vaccination is sufficient to eradicate the susceptibility to smallpox, while in others two and *sometimes more* are required, and therefore it is important to re-vaccinate as long as an impression can be made. This in families can be done, as it was in my own, as new members are added to their number.

3d. That vaccination will protect the life, and greatly mitigate the distress of a patient who has already taken the smallpox, if done in time to allow the first disease to pervade the system.

4th. That the common idea that the sooner the arm, from vaccination, the better the protection, is a mistake, and that a very small pustule which goes through the regular stages and produces a constitutional effect about the ninth day, is more generally *perfect* than one that produces great inflammation, pain and swelling

of the limb, and affecting the glands. Indeed, I am always suspicious of a case where this has occurred, and take an early opportunity to re-vaccinate, and have often had my suspicions verified by a good pustule.

5th. That the virus should always be taken before the areola forms, if taken from the pustule, and with great caution, as it does, in some instances, interfere with its progress. My own practice has been to save the scab and insert it in a pulverized form, by means of Fancher's Vaccinator, which is a very convenient instrument, and saves much time, and never produces unnecessary inflammation.

6th. That the virus should never be taken from any but healthy infants of healthy parents, and then there is little danger of propagating any other disease, as many think may be and often is done.

7th. That eruptions often occur after the most careful vaccination, and are owing to some peculiar idiosyncrasy, although the friends of the patient believe that it was owing to the virus. Hence the importance of the last rule, which may save the physician from blame.

8th. That a small scar, with pits or indentations around its border, is a much better evidence of the perfectness of vaccination, than a large, smooth and glossy one, though many think that the bigger the scar the better the vaccination.

9th. In re-vaccinating a patient who has a good scar, if the matter produce inflammation and itching for a few days and then dry up, I infer that the first vaccination was *perfect*. If it do not produce any other effect than is common to a slightly abraded surface, I infer that the virus is not good, and immediately make another attempt with a new supply.

I could illustrate all these opinions, by reference to cases under my own experience of 36 years, were it worth my while to write, or yours to print them. In this time I have vaccinated many thousands, and have been a careful and interested observer, and have yet to hear of the first instance of any case of varioloid or smallpox in a person vaccinated by me satisfactorily, except the four already mentioned; and if these crude thoughts assist any of the junior members of the profession in their search after the better way, I shall be more than satisfied.—*Med. and Surg. Reporter.*

ON THE ESCHAROTIC ACTION OF THE SULPHATE OF ZINC.

BY EBEN. WATSON, M.D., SURG. TO THE ROYAL INFIRMARY, GLASGOW.

THE cases of ulcer of the leg, admitted into the chronic wards of the Glasgow Royal Infirmary, are very numerous and of all different kinds. In some of these cases the simplest local and