ciated with the latter complication, and that it is efficacious in cases of tuberculosis, especially when associated with affections of the liver, or tendency to hæmorrhoids or fistula. The inspiration of the moist air of the inhaling-room is said to give great relief to the bronchial surfaces, and alter the character of the sputa. The inhaling-room here is merely a glass house placed over the fountain, not a large chamber, kept at a certain temperature, as at Amelie les Bains and elsewhere. Patients are very gradually accustomed to the inhalation of the gas; the most frequent pulse is made slower by it, and sometimes giddiness of the head makes it necessary to intermit its practice for a time.

Weilbach continues to enjoy its reputation, but it offers no amusement beyond its own walls, and is only to be sought by those who are patients in earnest. In the year 1869 it had 314 patients, reduced in the year of the war to 148. I cannot say that it is a place likely ever to be much of a favourite with the English.

THE TREATMENT OF SMALL-POX BY VACCINATION AND THE INJECTION OF LYMPH.

By R. C. FURLEY, L.R.C.S.

THE doctrine universally held, that vaccination will be of "no use" if delayed till five days after the inhalation of the germ of variola, I think, is erroneous. For some time past I have been in the habit of vaccinating every case of small-pox that has come under my care; and the result, as I shall show, is very encouraging, and seems to indicate that vaccination is not only prophylactic but *curative*. I have found, however, that, although the ordinary process of vaccination by scratching the arm is sufficient to modify the disease in infants, it is almost inoperative in adults. After having discovered that the ordinary process was almost useless in grown-up persons, I adopted the method of injecting lymph by means of Dr. Wood's hypodermic syringe. This instrument I also found occasionally to fail, because, on passing the wire through the needle after the operation to keep it clear, I have found it eject the lymph which I had hoped had been in the blood. This, I am afraid, has been the cause of two otherwise unaccountable failures out of sixty cases. How to obviate this source of fallacy occupied my thoughts for a considerable time. At last, however, I succeeded in inventing an instrument that promises to transfer lymph directly from the tube in which it is contained into the circulation. It consists of a hollow needle with a bore sufficiently large to admit of the introduction of a vaccine tube. The process consists in passing the point of the needle charged with a tube of lymph under the skin, and blowing the lymph directly into the blood. I have purposely described this minutely, in order that, if any of my brethren do me the honour of verifying the results of my treatment, they may not commit the errors which experience has pointed out. It would occupy too much space to describe many cases; I shall therefore only give three to illustrate the effect of the treatment at the different periods of life—infancy, childhood, and manhood.

CASE 1.—Baby C—, aged one month, and unvaccinated. When first seen, the papular eruption was over the face, hands, and legs. There had been three cases of small-pox in the house. One had been sent to the Small-pox Hospital, where the mother had visited him. I ascertained that this was really the case from the resident physician, Dr. Saxby. I vaccinated the child at once. Next day, when I called, the eruption had entirely disappeared, with the exception of two papules on the face, which were now more prominent. On the third day these two papules disappeared, and a fresh crop of four-and-twenty, chiefly over the head, made its appearance; and these became hard, and did not fill like ordinary vesicles. In three days these had also disappeared. The vaccination itself did not show any signs of taking till the tenth day, and was matured on the thirteenth.

CASE 2.—M. R—, aged thirteen years, vaccinated in infancy, and whose sister had died of small-pox a week before. I was called in on a Saturday, and found her face

considerably swollen, and the papular eruption on the hands and forearms. I at once *injected* two tubes of lymph into the arm. On Sunday the eruption had disappeared from the hands and arms, and appeared on the feet. On Monday it had spread up the legs and trunk. On Tuesday it had entirely gone away, and there was nothing to be seen but the inflamed areola at the point where I had injected.

CASE 3.—J. W—, aged thirty-four, a stableman of dissipated habits, and never vaccinated. I saw him on the second day of the eruption, and injected two tubes of lymph. The case, instead of being confluent, as might have been expected, was discrete, except at the alæ of the nose. He went on very favourably, and the eruption began to desiccate on the ninth day instead of the fifteenth, eighteenth, or twentieth. There was no areola at the point of injection.

I think these cases, selected from a number of such, show that there is at least a germ of truth in my statement that vaccination is curative of small-pox. I find that the treatment is much more successful in the youthful than in the adult period of life; and I am beginning to think that this arises from adults requiring, as it were, more of the remedy. It is also more effectual the earlier the operation is performed. I have usually found that the vesicles did not attain the size they do when the disease is allowed to run its course; they did not often become pustular, and desiccated earlier.

No doubt I have had failures and deaths; the latter five in sixty cases, in three of which I did not look for recovery from the first on account of other complications, and two were unlooked for: all were females—a fact of itself of some significance. I reserve for a future communication a detailed summary of all my cases; meantime I trust I have said sufficient to encourage my brethren calmly to investigate the subject.

I should have mentioned that the instrument I employ for transferring the lymph directly into the blood was made for me by Mr. Young, cutler, North-bridge.

Lauriston-place, Edinburgh, May, 1872.

A CASE OF POISONING WITH SULPHATE OF ZINC;

ONE OUNCE SWALLOWED; RECOVERY.

By A. J. MACKINTOSH, M.D.

ON the 24th of April last, my groom, aged twenty-one years, swallowed one ounce of the sulphate of zinc, instead of Epsom salts. While cleansing my surgery on that morning he took a quantity of the zinc with him, believing it to be common salts. At nine o'clock in the morning he weighed on the kitchen scales one ounce of it, mixed it with a little lukewarm water, and swallowed it all there and then. In a few minutes afterwards violent vomiting and severe purging commenced, and in less than half an hour he was so prostrate that he could neither walk nor stand. About half-past ten he was able to walk to his lodgings, the distance being about a quarter of a mile from my residence. When he arrived there he could not walk upstairs; they had to carry him.

The symptoms in this case were, violent vomiting, and severe purging during the forenoon. These gradually subsided before the evening. On the following day he experienced great pain from cramp in the arms and legs; also complained of much pain in the abdomen, more especially in the region of the bladder; dizziness, with slight soreness of throat. On the following Wednesday he walked about, and is now quite well and able to attend to his duties.

I have no doubt the greater quantity of the sulphate was thrown off by the vomiting, and the remainder by the purging. In a medico-legal sense this case must be interesting, owing to the large quantity taken, and the person recovering from it.

Downham Market, Norfolk, May, 1872.

THE German Treasury has granted £30,000 for the expenses of the German University of Strasburg. The lectures commenced on the 6th of May last.