

other way can I account for what must now be considered a grave error.

In insisting upon the correctness of this view, and urging its importance not only with regard to comparative pathology, but also the prevention of an odious and destructive human plague, I am well aware that I am placing myself in an attitude of antagonism to very high and estimable medical authorities in this country; and especially Sir Thomas Watson, who in a paper in the *Nineteenth Century* (which paper has been recently republished in a small volume) says, "The truth is, that the vaccine disease is really small-pox rendered mild by passing through the system of the cow; the great object of inoculating the small-pox was to produce a benignant form of the disease by diminishing the number of its pustules."

I have shown that there is no relationship between the prevalence of cow-pox and small-pox, and that the one may, and does, prevail in localities, and at times when and where the other is not seen. In Denmark, for instance, small-pox is all but extinct, and yet cases of cow-pox are far from rare. The difficulty experienced by those who believe in the unity of the two diseases, in accounting for this circumstance, is attempted to be got over in various ways. Bollinger, for instance (*Sammlung. Klinischer Vortrag*, No. 116), thinks that cow-pox owes its existence sometimes to humanised vaccine—the most extended and extensive of all the forms of variolic contagium, he says. "We must look," he writes, "to humanised vaccine as the source from which the greater number of cases of bovine variola have their origin." A few instances are certainly recorded in which, apparently, accidental infection of cows by recently-vaccinated people has occurred. Oslander alludes to the case of a cow which was so infected by a boy who had been vaccinated a short time previously. In the Prussian Veterinary Reports on Contagious Diseases among Animals for 1870-71, Koch reports that the vaccination of the people on a farm occasioned the infection of the cows with cow-pox, and in the same reports for the following year an outbreak of vaccinia was announced as having taken place among a lot of cows, consequent on the revaccination of three dairymaids. In three weeks the disease appeared, and gradually extended, so that in fourteen days of twenty-six cows only three escaped. The majority of the cows had only a few pustules upon the teats, but others had a number upon the teats and udder. In the same reports for 1874-75, Damman describes an outbreak of vaccinia in several sheds in the Rugen Kries, while in the district many children had been vaccinated, and the vaccine vesicles were fully developed. Schneider informed Bollinger that in 1876, after several children in a certain locality had been vaccinated, four cows in two sheds in the same place became affected with cow-pox; two dairymaids became accidentally inoculated from these, and one of the women communicated the infection to her children, who had not been vaccinated. Reiter also told Bollinger that in cowsheds where he vaccinated cows, several non-vaccinated animals showed the characteristic indications of the disease, which ran its course in the ordinary manner.

Though there is no reason to believe that cow-pox is infectious—i.e., virus *volatile*,—yet there is as little reason to deny that cows may not become affected through contact with newly-vaccinated persons, provided some vaccine lymph obtains access through a sore. But it is evident that this chance inoculation will not account for many, if any, of the reported cases of cow-pox.

(To be continued.)

FALL FROM A HEIGHT OF OVER SEVENTY FEET; RECOVERY.

By STEPHEN KARTULIS, M.D. BERL.,
HOUSE SURGEON TO THE GREEK HOSPITAL, ALEXANDRIA.

THE happy result of a fearful accident, attended with such severe injuries as shown in the following case, is, I believe, sufficient to justify me in sending it to THE LANCET. So tremendous a fall without immediate death is a rarity of the greatest interest, to say nothing of the satisfaction of seeing the case thoroughly cured in so short a time and with the most simple means a surgeon can command.

In the afternoon of 1st June last, an English boy in his eighth year, accompanied by an elder brother, a sister, and

an Arab servant, were playing on the terrace of a third-storey house (one of the highest in Alexandria), and not being able to fly a kite they had with them, clambered up on the roof of a wash-house. The boy wishing to cross over a beam which connected the front with the back part of the building, slipped and fell from the top to the basement on a granite pavement, a height of seventy-one feet three inches (carefully measured). I was immediately summoned, and on reaching the house a few minutes later was astonished at finding him still alive and conscious.

On examination I found, first, that both bones of the leg were smashed in the middle, so that the limb hung from the bed on which the boy was placed like a loose piece of the body. There was a sinus the size of a shilling above the fractured bone, whence issued a slight hæmorrhage. The femur was broken very irregularly about three inches above the condyle, so that it caused a deformity of the thigh; unfortunately it was not indicated, and the hour being late, and Sunday evening, it was impossible to obtain the assistance of another doctor, consequently the necessary bandages, &c., were not sent for. However, I made from the bedclothes sufficient bandages, and cut out of a piece of wood something like a Liston splint. This was done to get the fractured parts in as good a position as possible, leaving it to the following morning, if considered necessary, to make a more efficient bandage with the assistance of another surgeon. I nevertheless paid great attention to bringing the fractures to their proper bearings, but naturally I found much difficulty, unaided, in extending and dressing. I applied the splint to the outer part of the limb and bound it from the toes to the abdomen, leaving a fenestra on the sinus in the middle of the leg for the purpose of applying antiseptics. I washed it with a solution of carbolic acid, 5 to 100, and dressed it with gauze, &c. Ordered eight grains of calomel to be given at once, and an ice-bag to be applied constantly to the head.

June 2nd.—The boy had passed a restless night with convulsions. On a consultation with Drs. Mackie and Dove, of the Deaconesses' Hospital, it was decided to leave the setting as it was, to darken the room, and enjoin absolute rest. Bromide of potassium and ergotin to be given at intervals. Temperature, 39° C.; pulse, 160. Evening: temperature, 38·07° C.; pulse, 150.

4th.—Passed a restless night with delirium and convulsion. Formation of thrombus in the sinus; no pus. Elevated limb in a cradle, extending it at same time. Temperature, 37·05° C.; pulse, 130.

5th.—Better; without fever. Wound looks very well. No pus. Patient good-tempered.

6th.—Much better. No fever.

From the 6th to the 11th the patient progressed in health, and the wound granulated. On the 8th and 9th there was a little fever (38° C.) On the left temple, where there had been a contusion, a hæmatoma was formed, which I opened. On the 13th diarrhœa came on, which lasted for three days, and then passed off after the exhibition of bismuth. The general condition of the child was now satisfactory. He had no pains in the limb. The wound had healed; but there not being in the house all the commodities necessary for the requirements of such a case in absolute rest, a good deal of urine saturated the dressing, which became very offensive. I therefore determined to change the dressing. This state of things was indicated before the bones were united, and now that the time had arrived to bring them into a good position, and having obtained the valuable aid of Dr. Zancarol, of the Greek Hospital (Dr. Mackie having previously left for England), we took off the dressing, and applied a plaster-of-Paris bandage. This operation was carried out with great care, due respect being paid to the short lapse of time since the accident.

From this date I ordered a generous diet, and after thirty-three days removed the plaster bandage.

On examining the parts I found the fractures united, and with the exception of a slight curvature in the leg it was as sound as in its normal condition. In measuring, however, the length of both limbs, the injured one was found to be about half an inch shorter than the other.

On the 24th July the boy could hobble about with a crutch with slight assistance. Ordered an orthopædic apparatus for support of the limb.

On the 15th November the boy was racing across the playground of his school with six other boys of about the same age, and came in third.

Alexandria, Egypt.