

of opportunity in cities for free muscular exercise is compensated for by gymnastics, so the eyes should not only have time for rest, but should also be trained in both far and near seeing, and thus be symmetrically developed.

15 ARLINGTON STREET, December 9, 1876.

UNFORTUNATE RESULT OF VACCINATION.

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ON the 1st of October, 1876, a package of ivory points, charged with fresh cow matter, was procured of reputable vaccine purveyors, and used as follows:—

Three children were inoculated, namely: No. 1. A healthy boy twenty months old, of healthy Irish parents; a first vaccination. No. 2. A pale, rather large infant, whose mother is consumptive; age, one year; of Irish parents; a first vaccination. No. 3. A healthy infant four months old, born of Irish parents.

In these, and in all the cases cited, the matter was carried without delay from where it was got to the arm in which it was placed. The rest of the points in this package were given to a neighboring physician, who used them without effect.

No result occurring in any of the children inoculated with the points in this package, on October 21st a similar package of fresh cow matter was procured from the same parties. This package was used and distributed in the same manner as the first, and the result, so far as known, was null, except in cases No. 1 and No. 2.

In No. 1, on the seventh day, three dry scabs were found upon the points of inoculation, and the skin around showed a scaly epidermis, indicating a short-lived hyperæmia or slight inflammation.

In No. 2 there was a little redness of the skin on the third and fourth days, at the seat of inoculation, which, however, had entirely disappeared on the seventh day.

I am thus particular in stating these facts, as it is possible, although not probable, that the previous attempts at vaccination may have some bearing upon the unfortunate result of the third trial.

A package of human matter, warranted pure and fresh vaccine virus, was now procured from the same parties as before, with which were inoculated Nos. 1, 2, and 3, each in three places on the arm at about the insertion of the deltoid. The remainder of the package was thrown into the fire. The result was as follows: on the seventh day No. 1 presented three very perfect-looking vaccine vesicles, of the ordinary size and shape, round, cupped, with a thin scab just forming in the centre, surrounded by a pellucid ring of pure lymph, with slight areolæ of

redness, and without deep induration ; in short, a healthy arm. Matter was taken for No. 4.

No. 3 presented one vesicle like those just described in No. 1, somewhat smaller in size. Some lymph taken from it was introduced into the arm lower down, and some was also introduced into the arm of No. 2, which had not taken, and showed no marks of the previous attempts.

On the fourteenth day, No. 1 had marked symptoms of purulent infection. Deep black sloughs occupied the site of the vaccine vesicles ; there was brawny hardness of the whole deltoid region, a huge diffuse abscess reached from the axilla to the lower border of the ribs, with hard infiltration extending to the sternum in front, and below the scapula behind, showing a waxy whiteness with distended veins. A thin ichor flowed from large incisions and no pus. This child died of pyæmia on the twenty-first day. There was no autopsy.

No. 3 showed two perfect vaccine scabs with no signs of inflammation, both scabs being apparently of the same age, although the lower one resulted from inoculation by lymph taken from its fellow on the seventh day.

No. 2, inoculated for the fourth time with fresh lymph from No. 3, as above stated, and now at the seventh day, presented three large, unhealthy, irregular sores, following the scratches of the lancet. There was no clear lymph, but some yellow pus, deep induration of the whole deltoid region, and tenderness and enlargement of sub-axillary glands. This child was vaccinated from an infant who, both at the seventh and fourteenth days, showed the vaccine disease in its most regular form, without induration of the tissues, or tenderness and swelling of glands in or about the axillary region. But it should be remarked that this child (No. 2) had a somewhat scrofulous look, and a mother who was phthisical.

No. 4 is a healthy infant, of healthy American parentage, six months old, and living under the best sanitary influences. It was inoculated from No. 1, with apparently healthy lymph ; the result in every essential particular was the same as in No. 2, just described, namely, there were large, unhealthy-looking sores, spreading in the scratches made by the lancet, and inclined to burrow, with extensive induration of the arm, and some constitutional disturbance ; yellow pus instead of pure lymph on the seventh day, and enlargement of the sub-axillary glands, tending to suppuration. The sores, in both Nos. 2 and 4, became large excavated ulcers on a hardened base.

This virus was of course abandoned.