

mucous membrane of the pharynx, swelling of the joints, and especially on account of the long time which had elapsed since exposure, we thought the case was probably one of subacute rheumatism and prescribed soda salicylate and phenacetine. The temperature that night rose to  $102\frac{2}{3}^{\circ}$ .

On Wednesday a few shot-like papules appeared on the face and at the roots of the hair. On Thursday the pains became much less severe and the papular rash extended over the scalp and right side of the face. A few spots only were scattered over the chest and arms, and one or two on the palm of the right hand. Temperature fell to  $99^{\circ}$ .

The attack may be said to have ended with the exception of great bodily weakness and depression (pulse 40-50), a condition possibly due to the anodyne and antipyretics he had taken. No secondary fever followed. The rash seemed to abort largely in the vesicular stage, as only a few pustules were formed. The skin presented a smooth surface in about ten days after the commencement of the eruption. Convalescence was rapid and uninterrupted.

I have given the history of this case more in detail, as it presented many very interesting points. (1) The long stage of incubation, sixteen or seventeen days from the time of exposure until the first rise of temperature. Fourteen days are given as the maximum length of the stage of incubation. The cases reported in which this stage was apparently prolonged to twenty-two or twenty-four days were probably instances in which the poison may have been carried about the person some days before actual contagion took place. (2) The mildness of the constitutional symptoms in the stage of invasion. The pulse remained about 100-110, and the temperature did not rise higher than  $102\frac{3}{4}$ .

The pain in the back was not more severe than in other parts of the body. As a general rule the constitutional symptoms of varioloid are very severe, even in the milder cases. Altogether the diagnosis was extremely difficult, and was not made until the appearance of the eruption. The misleading features were the length of the stage of incubation, the comparatively speaking mild constitutional symptoms, and the prominence of the joint pains.

Dr. B. had been vaccinated when a child, and no doubt the mildness of the attack was due to that fact. As soon as the eruption appeared he was removed to the small-pox hospital, where he remained some weeks. It will thus be seen that the number of individuals attacked was six, and that of these five recovered. Of the latter all had been vaccinated except the ward-tender, and he only had the confluent form on the face. It is surprising that the disease did not make further ravages. The limited character of the outbreak can be explained in two ways: (1) The general adoption of vaccination, and (2) the complete isolation of the patients, when the diagnosis was made certain.

One would have supposed that patients in Ward No. 5, in which the first case occurred, might have contracted the disease. So far as I recollect the patients in adjacent beds suffered from typhoid fever, and according to some authorities the presence of this disease renders the individual impervious for the time to the small-pox virus. It might be interesting here to relate, although not bearing directly upon the subject, that in the typhoid cases vaccinated, the vaccinia ran a typical course; in one, however, the development of the vesicles was immediately followed by a relapse of the fever much more severe than the original attack.

The question of most importance suggested by the histories of these cases is: How early can a diagnosis be made; not a positive diagnosis, but one which would