

trivial aperture or abraded area, then the price that has already been paid is not too dear and the lives that have been sacrificed have not been lost in vain. Spread at one time over a city of the size of Philadelphia many thousands of simple open wounds, and provide for them the far superior care and attention that are usually devoted to minor surgical conditions, yet the list of fatalities from tetanus would probably equal or exceed in number the cases noted in the course of vaccinia. This is the actual experience of the day. And for the same reason: in both instances there is an open absorbing lymph surface that welcomes the tetanus germ. Following one Fourth of July I knew of and saw more cases of tetanus than I have seen or read of as connected with the vaccine sores of several years. The lesson is none too plain."

In the discussion which followed the reading of Dr. Willson's paper there was general unanimity of opinion that the shield is not to be recommended in the after care of vaccination.

An interesting point was brought out by Dr. Joseph McFarland who has been studying the literature of tetanus in association with vaccinia, and who has been able to find record of but a single instance of this complication in the years preceding 1882. From 1882 until 1901 only four cases are recorded, while in 1901 about twenty-four cases occurred within a few months. In all of this last series of cases the virus of one manufacturer had been used.

Dr. McFarland's remarks were to the effect that it is quite possible for the tetanus germ to be present in vaccine, and to remain latent for several days after vaccination before beginning to develop. Spread over an abraded surface and left freely exposed to the air, the germ would find itself under conditions very unfavorable for its growth, until, after the lapse of six or ten days, the vaccination lesion becomes covered with a crust. Then, protected from the outside air, it is able to develop in the necrotic and diseased tissues beneath.

Such variation in opinion does not help us to a conclusion other than that absolute cleanliness is to be insisted upon throughout the whole course of vaccinia, and that a vaccine should be selected to which no suspicion attaches.