The methods used and the results obtained in thirty cases vaccinated by the intracutaneous were as follow :—

The patient's skin at the point of election being thoroughly sterilized, a previously boiled hypodermic needle is introduced and inserted under the upper layers of the epidermis so superficially that the blue colour of the steel needle is perfectly discernable for its whole course. This needle is thus introduced for a distance of one-half to three-quarters of an inch, and at this point the vaccine taken from one or two capillary tubes is instilled after previous dilution with a few drops of distilled water. This instillation is immediately followed by an area of ischæmia slightly smaller than a five-cent-piece, and simulating an urticarial wheal.

At this point it may be interesting to note that the insertion of the hypodermic needle intracutaneously, while causing more pain than subcutaneously, as it is usually employed, does not give rise to a greater sense of discomfort than the open method.

The weal-like area is followed within a few hours by a like inflammatory area, which, in all cases resolves into a papule within twelve hours. With regard to the papule ; it is notable that the injection in like manner of any irritant will cause a similar manifestation, as has been demonstrated by experiments made. A similar quantity of distilled water and glycerine has been injected intracutaneously. The reaction which followed was much milder, however, and was of shorter duration than that following the injection of the same quantity of a solution of vaccine in the same individual, and at the same time.

The papule formed by such injection of vaccine is hard and shotty, and is surrounded by an area of hyperæmia varying with the susceptibility of the patient. It is also the seat of slight irritability and pain, which seems to vary in proportion to the measure of success or failure of the vaccination. This papule in three or four days becomes surmounted by, or changed into, a vesicle, which has in the past been considered the only certain evidence of success. It is conceivable, however, that certain inoculations followed only by papules, which never reach the vesicular stage, (perhaps through the mildness of the reaction) may be quite sufficient to give immunity against variola.

This intracutaneous method has been tried in over thirty cases, with the following results :—In 29 cases previously vaccinated one or more times, 16 were considered successful, 7 unsuccessful and 6 were doubtful. In 3 cases who had never been vaccinated, 2 were successful and one was unsuccessful. This unsuccessful case was possibly due to some fault in technique.

These suggestions are presented in the hope that they may be of