

to be kept up, on which to draw in an emergency. To this end it is desirable that the Dominion or Local Government should subsidize or otherwise maintain an *Animal Vaccine* establishment, so that every facility may be afforded for its propagation.

3rd. It gives the greatest possible guarantee of protection by enabling the practitioner to carry out true Jennerian vaccination, which has been amply proven by the recorded experiments of Woodville and others to be permanently protective.

4th. It enables vaccination to be carried on without reference to those already vaccinated or the necessity of our tapping a vesicle to obtain humanised lymph, thereby rendering it less protective, and it prevents a *vaccine famine*.

It has been objected to vaccination with animal lymph that

1st. It is too violent.

This I have found to be reversed in the case of Longue Pointe virus, the action of which has always been mild and pleasant. I have found always that the *less pure* the lymph has been that was used in any given case, the greater the local disturbance, and not long since I was asked to see two cases in which abscesses had followed the use of humanized lymph giving a great deal of trouble.

2nd. It has been asserted that animal vaccine might communicate diseases from the animal.

This objection cannot hold where only healthy animals of the choicest quality are used, and in a condition fit for the butcher.

3rd. That it is difficult to *take* unless used when quite fresh.

This is the only objection worth considering, which may be met and overcome by trying to understand and appreciate the fact that *bovine albumen* is much less soluble than the human, and therefore special care is necessary to liquify the lymph on the ivory point by dipping in *cold water* previous to using, and rubbing firmly over the scratches to remove the lymph effectually. This quite overcomes the difficulty.

4th. That it does not keep long active.

If collected on ivory points or slips, and properly put up for preservation, it keeps active as well and as long as any other lymph.

4th. That it is difficult to propagate.

This objection disappears in the hands of a competent and painstaking physician. There is no special difficulty in vaccinating animals that cannot be readily overcome with proper appliances and suitable premises

In the propagation of *animal virus* in the most efficient state for human vaccination, it should be collected at a *certain* and *brief period* during the early stage of the *vesicle*, while that taken at a much later stage is found quite efficient for the vaccination of other animals.

Animals should be selected of the best possible quality, and should be vaccinated directly from each other.

It cannot be denied either that for the successful vaccination of animals and collection of virus in the best condition for use, a high degree of intelligence, patience, experience and skill are required. It will not do to assign the task to an ordinary stable man.

6th. It has been objected that *animal virus* is expensive.

This objection will always continue owing to the trouble and expense which are inseparable with its propagation, but if the Government could be induced to give a money grant sufficient to establish and maintain a National Vaccine Institute, the expensiveness of it might be no longer an objection.

The common practice of vaccination has been very carelessly conducted as a rule, and the public have had no guarantee of safety from impure virus, for the following among other reasons.

1st. Because of the absence of any Government provision for the maintenance of a proper Vaccine Institute where a constant supply of *pure virus* could be produced for gratuitous or partly gratuitous distribution.

2nd. From ignorance and carelessness of practitioners in collecting and preserving lymph or crusts for future uses.

3rd. Too low fees for vaccination, considering its vast importance and the trouble and responsibility which it entails, thereby encouraging indifference.

4th. Neglect of public vaccination by municipal bodies, and low salaries given public vaccinators where it is carried on, vesting the character of service rendered entirely upon the physician's own conscientious sense of duty.

As this is a question of State Medicine, something should be done by the State to establish a Vaccine Institute. It would be very gratifying to find the example of the Government in the mother country followed by the Government of the Dominion in providing animal vaccine at the public expense for gratuitous distribution.

I trust the Committee on Sanitary Legislation appointed by this Association may use its influence