

the temperature is high at the time of injection. In actual outbreaks, contact horses, even when showing no clinical symptoms, but having a high initial temperature, dropping or remaining stationary after injection, should be condemned, especially when a local reaction occurs.

In fact it may be laid down as a general rule that a typical local reaction is proof positive of the existence of Glanders, even when no thermal disturbance takes place.

There is not, as a rule, much difficulty in distinguishing between a typical and a non-typical reaction. The former has been already described. In the latter the thermal rise seldom exceeds  $2^{\circ}$ , and reaches its greatest height at or before the 12th hour, returning to normal before the 20th hour.

The swelling, when circular, rarely exceeds three inches in diameter. It is only slightly painful, is quite superficial, soft and moveable, does not increase after the 8th hour, and is rapidly absorbed during the course of the second day. It never affects the action of the muscles, nor does it cause lameness. Sometimes a fluctuating dependent swelling of considerable size follows a careless or unskillful injection, but this, as a rule, is absorbed rapidly during the first 24 hours.

With ordinary precautions septic infection seldom takes place, and abscess formation is rare except in typical reactors, when it is not uncommon. Occasionally considerable swelling, sometimes accompanied by a thermal rise, will occur in horses suffering from influenza and similar affections. Such so-called reactions are not typical, and should not be ascribed to the action of Mallein, but to the already existing febrile condition of the animal.

Cases sometimes occur in which, at the end of 24 hours after injection, neither thermal nor local conditions are sufficiently definite to enable the veterinarian to reach a decision. In these circumstances the animal should be kept under close observation for a further period of 24 hours, when, if it is diseased, the increased swelling and marked lameness which almost invariably follow will remove any possible doubt. Suspected cases which have failed to give a decided reaction will not unfrequently develop clinical symptoms if put to hard work immediately after being tested.

Reaction, both thermal and local, but especially the latter, is not as well marked in mules as in horses, but as in the former acute symptoms are more likely to develop early in the course of the disease, the risk from latent cases is less serious.

It may be laid down as a general rule that while an apparent improvement in health and condition may, and frequently does, follow the application of the test in mild or incipient cases, the effects of Mallein on animals in advanced stages of the disease are invariably bad, and that the testing of such cases hastens a fatal termination.

Local reactions are more pronounced in hot weather than when the atmospheric conditions are moderate. In connection with this statement