

other instances paralysis of the limbs becomes most marked before death.

Further, it is now clearly established that rabies can be transmitted from herbivora to herbivora by the ordinary means of infection, viz., the saliva.

This assertion, says the report, is, I think, warranted by the fact that although these animals were isolated for a period of six months, a time far beyond the recognized period of incubation in rabies, the disease continued to progress in the herds after all possible means by external infection had been cut off.

The most important question, however, which arises out of this outbreak, is the means by which the virus was transmitted from animal to animal.

It has been found that although the deer attempted to bite one another, they did not really penetrate the skin with their teeth, but only produced sores thereon; at the same time the diseased animals left a certain amount of saliva on the skins of those which were bitten. It was observed on several occasions when a healthy deer had been bitten by a rabid one, that the animal bitten licked the spot, no doubt with the desire to soothe the irritation caused by the pinch or bite, and Mr. Sawyer informed me that it is a common practice for deer to lick the coats of other deer.

From the clinical report we extract the following:—

Deer No. 4.—Admitted into the Brown Institution 20th June 1887. This animal, a buck, had been separated from the herd for three months, till the 1st June when, as described by Mr. Cope, Deer No. 3 was placed with it and attacked it severely. On the 19th June (thus 19 days, incubation period) it showed the premonitory symptoms, and was at once forwarded to the Institution.

20th June 1887.—Animal very excitable and most aggressive. It made attempts to eat and drink, but it was very difficult to determine whether it actually swallowed food.

June 21st.—Worse, much more vicious. It stood with its head thrown back, the eyes staring, and it charged everything which suddenly attracted its attention. This day I observed for the first time in these animals a genuine pharyngeal spasm on its attempting to swallow water. It plunged its muzzle deep in the water, made champing movements with its jaws, and tried to swallow. The larynx could be seen rising in jerks just as in the human being,

while the water ran out of the angles of the mouth. It did not eat.

22nd June.—Paresis set in this day. Every charge the animal made was accompanied by staggering, and not infrequently fell, the hind quarters sinking and the hind limbs collapsing.

23rd June.—Animal died in the night.

In the pathological and experimental report we find it stated that from these two animals the medulla oblongata was removed and sent to the Brown Institution. In each case a portion of the medulla was crushed in sterilised bouillon, according to the method described by M. Pasteur, and a small quantity injected into the subdural space of two rabbits.

The four rabbits thus inoculated all died of typical rabies, the incubation period varying from 10 to 14 days. The post-mortem appearances were most characteristic, as I have elsewhere described to be found in these animals when dying of this disease. (Report to the President of the Local Government Board of a Committee of Inquiry into M. Pasteur's treatment of Hydrophobia.)

From a pregnant doe, dying of the disease, inoculation experiments were made with the fœtus as to whether the virus could be transmitted by it. The spinal marrow was cultivated in bouillon and inoculations made from the solution. The results must be regarded as having been negative.

OTOLOGY.

Foreign Bodies in the Auditory Canal.

The *International Medical and Surgical Synopsis* reports the following from Dr. Charles Barck, of St. Louis:—Several cases happened to come into my hands lately, where the removal of foreign bodies from the auditory canal had been attempted in vain, and serious damage done to the tympanum. This leads me to the conclusion, that the rules for proceeding in such cases are generally not as well known as they ought to be. Yet they occur in the practice of every physician and he is summoned to act immediately. But rough and ill-advised experiments at extraction are much more dangerous than the presence of a foreign body itself, as already emphatically expressed by Wilde. There are several cases on record which ended fatally. Wendt reports a case where a pit of johanisbrod (?) (cannot find the English term) had been