

HORSES.

Cause, Treatment and Prevention of Influenza.

Influenza—epizootic, catarrh, catarrhal fever, pink-eye, hepatic fever, and many other synonyms, all pertain to different manifestations of one disease, influenza. It is a contagious and infectious disease, affecting the equine species.

The disease brings about certain changes in the blood; it affects the brain and nervous system, causing profound depression of the vital forces, and frequently produces complications of an inflammatory character, affecting important vascular organs, particularly the lungs, intestines, liver, brain, and occasionally the sensitive structures of the feet. It is very apt to assume an epizootic form, and the tendency is to complications of certain organs at different outbreaks. For instance, at one time the disease may be in the catarrhal form; at another it may affect the throat—laryngitis—and in other outbreaks it will manifest itself by attacking some other organ of the body, perhaps the lungs, or an abdominal organ.

The period of incubation—that is, the time elapsed between the entrance of the germ into the animal's system, and the first evidence or manifestation of influenza—appears to vary within certain limits. When, during an epizootic, a sick horse is brought into a locality which has hitherto been free from the disease, fresh cases usually develop in from one to three days. In fact, cases are on record where only a few hours have elapsed before a new case was discovered. In other cases the incubation period has been extended to fifteen days. As an explanation for the prolonged incubation, we must take into account the varying susceptibility of the animals exposed, and the potency of the individual germs.

The symptoms of influenza vary according to the vagaries of each outbreak, but in general these phenomena are present: Sudden attack, absence of appetite, profound early prostration, and weakness, high temperature, swelling and watering of the eyes, brownish-red coloration of the lining membrane of the eyes, nervous prostration and stupor, pulse unusually fast and feeble, lacking in firmness, even when the heart beats forcibly. In the mild catarrhal cases, the chief symptoms are a discharge from the eyes and nose, accompanied with sneezing and coughing; the cough may at first be nervous, husky and paroxysmal, but later, as the discharge is established, it assumes a looser, mucous character. Coughing is liable to be started by excitement, by drinking cold water, by inhalation of dust, or by giving medicines. In connection with these symptoms there are usually indications that the digestive organs are involved.

These mild attacks, which constitute the majority, will show marked improvement on the fourth or fifth day, and prompt recovery follows.

When the thorax—chest—and its organs are involved, the symptoms are very much more severe, and the danger of a fatal termination correspondingly greater. These complications may occur in any affected animal, but the young are particularly liable, and are frequently met with when the sick are housed in close, badly-ventilated buildings, or where the victim has been overworked, poorly fed, or is in any way a debilitated subject. In exceptional cases, congestion of the lungs may be so acute as to lead to speedy death, or pleurisy and pneumonia may follow congestion. The heart and its envelope also frequently become involved in the inflammatory action going on within the chest cavity. When the heart is affected, the tendency to extensive infiltration—swelling—of the limbs and lower aspect of the trunk is much in evidence.

In the abdominal cavity, congestion of the stomach and bowels are indicated by loss of appetite, flatulence, constipation, or, in certain cases, diarrhea, slight transient colics, and tucked-up flanks, the faeces (dung) are passed in small balls, a few at a time, hard, and with a glistening surface; the odor is unusually strong and offensive. Urination may become frequent with straining, the urine is scanty and high-colored. When the liver is affected, the conjunctiva (lining membrane of the eye), by its color, shows evidence of the presence of bile in the blood. Instead of being pink, as in the normal subject, it is a yellowish brown.

The complications of influenza are of many kinds. Pregnant mares may abort, laminitis (founder) may result, the microbes of strangles, contagious pneumonia, cerebro-spinal meningitis, septicemia, take advantage of the debilitated system, and thus complex diseases are developed. There are many other symptoms of this disease, known and observed by the expert veterinarian, which may be overlooked by the average layman, so they will not be alluded to in this article.

On account of the great importance of this disease, affecting as it does nearly every fresh importation into Saskatchewan from the East and South I have dealt at length with the most

prominent symptoms. Influenza is not, under ordinary circumstances, a fatal disease. The mortality has been stated by different authorities to amount to from 3 to 10 per cent. In the outbreak which occurred in Toronto and extended through the States in 1872, the mortality among 30,000 horses was 7 per cent. The variation in the mortality, as given by the different observers, may be put down to the difference in the surroundings of the sick horses. It is generally conceded that an animal once attacked is immune from further susceptibility to the disease, but in practice we are aware of exceptions to this rule. Young horses are predisposed to be attacked, while the older ones, even if they have not had the disease, are less liable to it. Again, the young horse is the one usually imported. He is taken from the farm, where he has been free from the risk of exposure to disease, and is exposed to the infection at every turn. In livery and feeding stables, where dealers usually assemble their purchases until a sufficient number is obtained to ship, the first exposure usually takes place. The next probably takes place in the previously-infected railway car, then in the damp stables of our city dealers. Through these centers of infection the disease is perpetuated. The atmosphere is

brown color, the animal convalesces promptly to its usual good health.

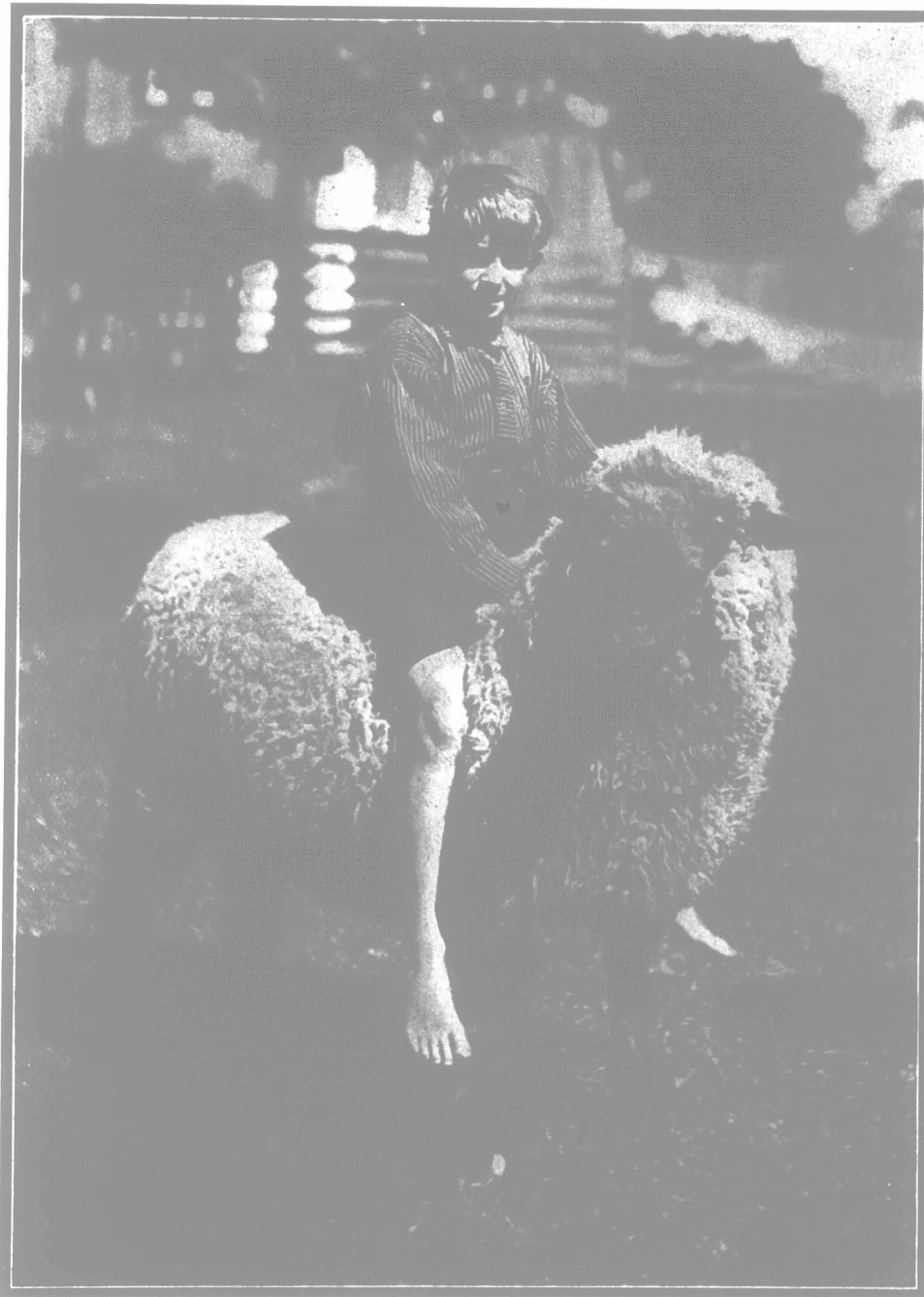
The treatment of influenza varies according to the conditions prevailing in the different outbreaks, and whether the disease is of a virulent type. The many complications, also, must be taken into account. We will only here refer to the treatment of mild cases, for unless the disease is of the very mildest form, a veterinarian should be called in without delay. In the first place, the patient should be placed in a comfortable loose box, well lighted and ventilated, and the temperature should be kept at between fifty and sixty degrees; by artificial heat, if necessary, but never by closing the stable tight so as to impede the ingress of pure air. The body should be well blanketed, and the legs hand-rubbed and bandaged. A disease like this, which tends to spontaneous recovery, needs mainly dietetic and hygienic care. Rest is the prime consideration, combined with comfortable surroundings and pure air. In the summer, during fine weather, mild cases do best when housed in open sheds, but protected from drafts; or, even on pasture, the animals brought in during rain or cold winds.

The food should be cooling and laxative, bran mashes, steamed hay, carrots and grass, if in season. Some horses relish an occasional feed of boiled oats and flaxseed. Always allow a plentiful supply of fresh, clean water, given often. Linseed tea and hay tea may also be taken with a relish by many horses. Milk may be allowed if the horse will drink it. Constipation may be overcome by injections of warm water. Cold water may be used if the fever continues high. By unloading the large intestine, it removes irritants, without the danger of increasing the congestion or diarrhea.

If anything further is required in these mild cases, stimulating medicines of a mild character, which act on the kidneys and skin may be given. Nitrous ether, in 4-ounce doses, or the liquor acetate of ammonia, in 2-ounce doses, may be given in the drinking water twice a day. If these medicines are not available, 4-ounce doses of nitrate of potash may be given in drinking water once or twice a day, if the temperature continues high. Quinine, in 2-dram doses, should be given two or three times a day, until the temperature is reduced to near normal. In the severe cases, more active treatment must be resorted to under the guidance of the veterinarian.

From what has already been stated, it will be readily seen that the only preventive to this disease is to avoid exposure to infection. When recently-imported horses are to be introduced among horses that are free from the disease, the new arrivals should be isolated for two weeks, until the period of incubation is past. Then there is not likely to be any spread of infection. The disease called shipping fever is a mixed infection, comprising one or more of the forms of influenza and its complications. On general principles, the treatment is as outlined above, but on account of the serious complications attending these cases, they should be treated by the skilled veterinarian. Thorough disinfection of stables, railway cars and other places where sick horses have been, should be done.—[From "The Farmer's Advocate and Home Journal," Winnipeg.]

[Note.—In recommending treatment for the various forms of this disease, our veterinarian ad-



A Soft Saddle.

the most common carrier of the infection from sick animals to healthy ones, and by it may be carried for considerable distances. The contagion will remain in the bedding, and in the manure from sick animals (the manure being particularly infectious), also in the feed; and if these are removed to other localities, the disease may be carried with them. Infection may be carried in the clothing of those attending the sick animals. Drinking water in troughs, and even running water, may carry the germs, and be the means of spreading the disease at a distance.

Experience shows that the virus of influenza is excessively diffusible, and often erratic. Dirt, which often is allowed to accumulate in the feed-boxes of sick horses, will hold the contagion for days, or weeks, and communicate it to susceptible animals, if placed in the same stalls or stables.

At the termination of the usual course of the disease, which is generally in from a week to ten days, the fever abates, the swelling of the legs and under surface of the belly diminishes, the appetite returns, the strength is rapidly regained, the visible mucous membranes lose their yellowish-

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