

Infectious respiratory suspected malleus in a pony in Sidoarjo east java Indonesia

¹ Arya Pradana Wicaksono, ² Romziah Sidik

¹ Equine Practitioner in East Java, Indonesia Equine Veterinary Medical Association

(aryapradanawicaksono@gmail.com).

⁵ Profesor in Department of Animal Husbandry, Faculty of Veterinary Medicine, Airlangga University

(romez02@yahoo.com).

Abstract -- The objective of the case study research was to prove the clinical symptoms and via a necropsy observation of a native horse in Indonesia suspected of Glanders or Malleus disease. The case studied was carried out in Sidoarjo and Malang, a district of East Java. Three cases were found in Malang district, and one case in Sidoarjo district. All of the horse patients showed the same clinical symptoms: fever about 41-42°C, sluggish face, often bowed their head, *anorexia*, tottering walk, colic, and a cough with nasal discharge. Based on macroscopic pathological studies, the anatomy showed the formation of nodular lesions in the lungs, ulceration of the mucous membranes in the upper respiratory tract, a darker and enlarged gastro-intestinal tract, ptechia on the mucous of intestine and colon, and the horse suddenly dying in a few days. It is assumed that any septicaemia and colic accelerated the horse's death.

Key word: horse, respiratory, pony, zoonotic

I. INTRODUCTION

Pony horses in Indonesia are native horses with the following characteristics: medium to large size, very active, short hair with colour variations, short front and back legs, adapted to the tropical climate, agile and bright. The pony is spread throughout East Java, West Sumatra, Sulawesi, and Nusa Tenggara. Commonly, horse raising can be a hobby, for carriage, riding, sport, cavalry and tourism. Nowadays, the horse in Indonesia has become as a commodity animal that has a high economic value and is the pride of the owner. Glanders is a disease problem in horses with high transmission between horses and medium transmission between horses to humans. Glanders is endemic in Africa, Asia, the Middle East, and Central and South America. It has been eradicated from North America, Australia, and most of Europe through surveillance and the destruction of affected animals. It is a zoonotic disease. (Dance, 2009) Transmission occurs by direct contact with infected animals through skin abrasions, nasal and oral mucosal surfaces, or by inhalation. Glanders disease is caused by *Burkholderia mallei* (*B. mallei*), as a clonal gram-negative, facultative intracellular obligate pathogen. The mallein test is a sensitive and specific clinical test for glanders. A protein fraction of the glanders organism is injected intradermally or given

by eye drops (Dance, 2009). In infected animals, the eyelid swells markedly in 1 to 2 days. Some accidental exposure can cause death in humans. A case study about glanders occurred in Sidoarjo, which is an industrial city near to Surabaya, East Java with a high population density. Emergency cases of suspected glanders are forwarded to the university for treatment and to be analysed by macroscopic pathologic anatomy examination (Wood, 2005).

II. OBJECTIVES

The objective of the case study was to observe and report the sporadic development of respiratory disease in Indonesian native horses.

III. METHODS

In the case study, the main specimen was a male pony around 250 kg body weight and three years age, chestnut color. Based on anamnesis and clinical symptoms, the symptoms were: sluggish face, often bowed his head, *anorexia*, tottering walk, colic, body temperatures around 41° to 42°C, cough with nasal discharge. The initial diagnosis was that the pony was suspected to be infected by Glanders or Malleus disease, and was injected with Fluxin as a meglumine 5% 10 cc and gentamycin double dose to prevent more infection.

The other cases found were three horses in the same area with similar symptoms and death within a few days. Further necropsy investigation of all of the dead horses which had signs of glanders disease showed the formation of nodular lesions in the lungs, and ulcerations of the mucous membranes in the upper respiratory tract. The acute form resulted in coughing, fever, and the release of an infectious nasal discharge, followed by *septicemia* and death within days. In the chronic form, nasal and subcutaneous nodules develop, eventually ulcerating (James, et al 2006). Death in this case can occur within months, while survivors act as a carrier.

Before starting the lead diagnosis, more concern was given to glanders due to the colic accelerating death. In some of the pathological pictures, there is ptechia in the mucous tissue of the intestines and colon.

The collected data was analysed by a macroscopic examination of the pathological anatomy, and bacterial culture in specific media (Dance, 2009).

IV RESULT

A necropsy of the horse's body was performed to obtain a confirmation of the diagnosis of the symptoms that were seen before. Based on the necropsy observation, any yellow nodules that looked like cheese on the horse's skull were noted; it was necrosis of the surrounding the tissue. Slime and foam were very common in the horse's trachea. Another symptom to look out for was *ptechiae* (blood spot) in the cartilage wall of the pharynx and larynx up to the lungs. Blood spots were also seen in all areas of mucous in the gastrointestinal tract of the horse. The conditions made the horse get colic and are suspected to have hastened death, because the horse was found floating amid the flood in the surrounding area.

V. DISCUSSION

Nodular lesion and acute pneumonia, in which there is an ulceration of the nodular membrane until release of nasal discharge. *Septicaemia* is the last stage sign of alleus. Turbid fluid comes out when the incision is made in an area that looks darker in the lungs so there is a proven edema. In the colon and small intestine of the dead horses found many undigested feed that was consumed, and the condition indicated that the horse had appetite loss (James, et al 2006). The size of the ileum and jejunum was enlarged compared to the normal standard size. This condition encouraged accumulated gas before and after the horse's death. They were often given drugs and antibiotics by their owner without consultation with a veterinarian. Figure 1, 2, and 3 shows the observation of suspected Glanders /Malleus disease of the pony (Woods, 2005).

Fig 1: ptechia/blood spot of horse larynx mucous



Figure2: Yellow Nodular on the skull of horse



Figure 3: Enlarger Gastro intestinal tract of horse



VI CONCLUSION

Based on case study of clinical symptoms of Glanders or Malleus disease in native horses, it showed the symptoms of: sluggish face, often bowed head, *anorexia*, tottering walk, colic, body temperature around 41° to 42°C and cough with nasal discharge. By macroscopic pathological study, non-normal anatomy was found including yellow nodules like cheese on horse's skull and necrosis surrounding the tissue. Slime and foam was very common in the horse's trachea, as were *ptechiae* in the cartilage wall of the pharynx and larynx up to the lungs.

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