Hemorrhagic septicaemia: Trend of seropositive cases in Malaysia from 2015 to 2022

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ABSTRACT

Introduction: Hemorrhagic septicemia is an acute disease caused by the bacteria *Pasteurella multocida* serotypes B:2 (Asian) and E:2 (African). This disease causes acute septicemia in cattle and buffaloes. Hemorrhagic septicemia (HS) outbreaks can occur at any time, but the frequency of the disease increases during the rainy season. **Objective:** To study HS trends in the country based on serodiagnostic cases sent to the Veterinary Research Institute (VRI), Ipoh from 2015 to 2022 using the ELISA technique. **Materials and Method:** Random serum samples from animals with and without HS vaccination were received at VRI for *Pasteurella multocida* IgG antibody detection using an in-house indirect ELISA kit. A BioTek 800 TS microplate reader was used to enumerate the ELISA Unit (EU) percentage in order to confirm the presence of IgG antibodies against the HS organism. **Results:** Between 2015 and 2022, a total of 261 cases were received at VRI. Of the 3576 samples, 85.9% (3070) were from cattle, 11.0% from buffalo, 2.4% from sheep, 0.4% from goats, and 0.3% from rabbits. The IgG antibodies against the HS organism were detected in 13.5% (16/118 cases) in 2015; 17.4% (12/69 cases) in 2016; 4.8% (2/42 cases) in 2017; 20% (1/5 cases) in 2018; zero detection in 2019 (2 cases) and 2020 (8 cases); 33.3% (3/9 cases) in 2021; and 36.4% (4/11 cases) in 2022. Based on the geographic distribution of seropositive cases, Perak reported the highest antibody detection with 33 cases, followed by Kedah and Terengganu with 2 cases each, and Kelantan with 1 case. Over the period of study, cattle contributed 94.2% of positive cases, whereas buffalo and rabbits contributed 1.9% and 3.8%, respectively. **Conclusion:** Hence, the trend of seropositive cases has been shown to be unstable over the past 8 years. Thorough post-vaccination monitoring and detailed screening of naïve herds are important to provide valuable epidemiological information about the disease.