SEROTYPES OF Pasteurella multocida ISOLATED FROM VARIOUS SPECIES OF ANIMALS IN NORTHERN INDIA AND THEIR ASSOCIATION WITH DISEASES

Aneesh Thakur1, Mandeep Sharma2, Prasenjit Dhar2, Vipin Katoch2

1National Veterinary Institute, Technical University of Denmark (DTU), Copenhagen, Denmark, 2Department of Veterinary Microbiology, DGCN COVAS, CSK HPKV, Palampur, India

Pasteurellosis is a global problem, including India and has been reported from livestock, birds and a wide variety of wild animals. Haemorrhagic Septicaemia (HS) is a severe form of pasteurellosis caused by P. multocida. The disease causes heavy financial losses to the farmers and the losses are considerable in cattle of Indian subcontinent. The present study was part of the All-Indian network program on HS with objectives of isolation and characterization of P. multocida from field outbreaks and serotyping through capsular and somatic antigens. Over a 6-year period (November 2001 to March 2008), a total of 667 specimens from cattle and buffaloes and 1150 from sheep and goats, were processed for the isolation of P. multocida. They were collected in the various regions of Himachal Pradesh, a hilly State in the Northern India. This investigation represents distribution of serotypes isolated from various clinical specimens submitted from diseased animals in these regions. Specimens mainly comprised of blood, organs and discharges. Primary isolation was performed on blood agar, nutrient agar and McConkey lactose agar with confirmation thorough standard cultural and biochemical tests as per Carter and Cole,1990. Molecular confirmation through species-specific PM-PCR assay and serotyping was performed at Indian Veterinary Research Institute, Izatnagar, India. P. multocida serotype B:2 was the most prevalent type isolated from all species of animals. In cattle and buffaloes, the majority of serotypes were associated with pneumonia, followed by septicaemia. The situation in sheep and goats was similar regarding the incidence of pneumonia although less severe. Up to 11% of cattle isolates and 27% of the isolates from sheep and goats specimens were non-typeable. Overall occurrence of the disease was more in buffaloes with severe disease outcome than cattle, sheep and goats. P. multocida serotype B:2 was found to be the most prevalent among animals from this Northern State of India.