PREVALENCE OF *MANNHEIMIA HAEMOLYTICA* AND *PASTEURELLA MULTOCIDA* IN GOATS FROM SELECTED FARMS IN SELANGOR, MALAYSIA

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Abstract

Mannheimia haemolytica and *Pasteurella multocida* are natural inhabitants of the upper respiratory tract of healthy animals and can cause pneumonic pasteurellosis in stressed animals. Healthy animals are able to control the multiplication of these bacteria and the inhaled bacteria, if they migrate to the lungs, will be cleared by the host defense mechanisms. Stress and other infections will cause the breakdown of the host defense mechanisms. These will lead to multiplication of the bacteria and colonisation of the lungs. Outbreaks of pneumonia occur in 10 to 14 days post-stress exposure. These bacteria are gram-negative, facultative anaerobes and have rod-shaped morphology. The special characteristic of these bacteria is that they show bipolar staining characteristic under Giemsa and Wright's stains. *Mannheimia haemolytica* is haemolytic on blood agar and O-nitrophenyl-β, D-galactopyranoside (ONPG) positive while *Pasteurella multocida* is non-haemolytic on blood agar and ONPG negative. Ninety six (96) nasopharyngeal swab samples were taken from 4 goat farms in Selangor, Malaysia and bacterial isolation and identification were carried out. Presumptive isolates were identified by biochemical tests. Out of the 96 samples, 3 were positive for *Mannheimia haemolytica* and 11 positive for *Pasteurella multocida*. This gives a 3.13% and 11.46% prevalence rate for *Mannheimia haemolytica* and *Pasteurella mutocida*, respectively. The antibiotic sensitivity tests done on both isolates showed 29% were resistant to streptomycin and 21% resistant to compound sulfonamide. All isolates were sensitive to ampicillin and amoxicillin-clavulanic acid whilst 93% was sensitive to oxytetracycline and enrofloxacin. Even with low prevalence of *Mannheimia haemolytica* and *Pasteurella multocida*, it is important to control and prevent their infections and also to prevent further development of antimicrobial resistance as the disease is associated with these bacteria and have high economic impact.

Keywords: goat, *Mannheimia haemolytica*, *Pasteurella multocida*, prevalence rate, antibiotic sensitivity test