Preliminary investigation of exercise-induced pulmonary hemorrhage in draft pulling horses in Atlantic Canada

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Exercise-induced pulmonary hemorrhage (EIPH) is a well-documented disorder occurring in horses undergoing high-intensity exercise. EIPH occurs when capillaries in the lungs rupture, causing varying degrees of bleeding in the lungs. While well-researched in racing horses, this disorder has not been investigated in competitive draft pulling horses or how it may affect their performance, health, and welfare. This study is a preliminary investigation into EIPH prevalence in the competitive draft pulling horse population competing on Prince Edward Island (PEI). From May-August 2022 approximately 40 study horses will undergo upper airway endoscopy approximately one-hour post-exercise at numerous competitions throughout PEI. Participating horses are selected from a volunteer population recruited at competitions, and during endoscopy each horse will be given a score for EIPH (scored 0-4), left laryngeal hemiplegia (LLH, scored 1-4), and tracheal mucus (scored 0-4). Any other upper airway abnormalities will also be noted in order to examine any associations with EIPH, as well as to note any welfare concerns. The preliminary data on 18 horses shows a sampled EIPH prevalence of 39%, with LLH at a sampled prevalence of 33%. Considering only the horses with these factors present, EIPH scores had a median of 1 (mode =1, range = 1) while LLH had a median score of 2 (mode = 2, range = 1-4). The sampled median tracheal mucus score was 1 (mode= 1, range 0-3). Statistical analysis will be conducted to determine any associations between EIPH, LLH, and demographic and competition data. Based on the preliminary data, it appears that low-grade EIPH occurs in a subset of competitive draft pulling horses during competition.

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