

**COMPARISON BETWEEN TWO SERUM IgE TESTS FOR THE DIAGNOSIS OF RAO IN HORSES.**

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The objective of the study was to compare the accuracy of 2 commercial serum IgE tests for the diagnosis of RAO in horses. For this study, serum samples from 23 RAO horses, 11 horses with non-allergic inflammatory airway disorders, and 23 control horses were blindly submitted to measure IgE levels against different inhalant allergens (grain mill dust, grasses, molds, mites, weeds and tree allergens) by using 2 different commercial tests (Allercept<sup>®</sup>, HESKA<sup>™</sup>, and Equine ELISA<sup>®</sup>, ALERGOVET<sup>™</sup>). A horse was considered positive when serum IgE levels to any of the allergens tested were above the normal range. When using the first test (HESKA<sup>™</sup>), sensitivity and negative predictive values were 69.6% and 66.7% respectively, while specificity and positive predictive values were very low (42.4 and 45.7%, respectively). In contrast, when using the second test (ALERGOVET<sup>™</sup>), sensitivity and negative predictive values were very high (95.7 and 96.0%, respectively), while specificity and positive predictive values were 72.7% and 71.0%, respectively. Regarding allergens detected, the first test showed that RAO horses were mainly affected by mites (87.5%), tree allergens (68.7%) and weeds (56.2%); whereas the second test showed that grain mill dust was the main allergen detected in RAO horses (63.5%), followed by mites (35.0%), grasses (30.0%) and molds (25.0%). In conclusion, serum IgE evaluation may be a very useful diagnostic tool in horses, but it depends on the test used. Based on the high accuracy observed with the second test, grain mill dust would be mainly related with allergic respiratory disorders.

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