EVALUATION OF BLOOD GROUP SALIVARY SECRETORY STATUS IN DOGS

Roberta Perego (1), Eva Spada (1), Luciana Baggiani (1), Martina Falco (1), Daniela Proverbio (1)

(1) Università degli Studi di Milano, Dipartimento di Medicina Veterinaria e Scienze Animali, Lodi, Italy

Corresponding Author: **Roberta Perego** - roberta.perego@unimi.it

Some people, called secretors, secrete ABO blood antigens in body fluids, particularly in saliva1. The salivary secretory status prevalence varies from 60 to 80%, with ethnic and sex differences2. Many studies have shown that nonsecretory status could be a risk factor for a number of infectious and non-infectious diseases3. In dogs there are no studies looking at salivary expression of blood antigens and it is not known if salivary secretory status exists in dogs.
The aim of this preliminary study was to look for DEA 1, DEA 4 and Dal antigens in canine saliva and define the prevalence of salivary secretory status in dogs. Thirty-six saliva samples were collected from healthy DEA1+, DEA4+ and Dal+ donor dogs of different age, sex and breed. A dedicated device was used for saliva collection (Salivette□) and the salivary secretory status determined through two methods: the tube inhibition test and the gel-based inhibition test. The presence (nonsecretory status) or absence (secretory status) of agglutination was macroscopically and microscopically evaluated for the tube method and only macroscopically for the gel method. Agglutination was graded from 0 (absence) to 4+ (strong). With tube, 25 and 32 canine saliva samples were tested for DEA 1 and DEA 4 antigens, respectively, while with gel, 25, 30 and 24 saliva samples were tested for DEA 1, DEA 4 and Dal antigens, respectively.
Furthermore, for each method, repeatability tests were carried out. The K coefficient was calculated to verify the concordance between macroscopic and microscopic results on tube method and between tube and gel methods.
All saliva samples tested showed agglutination with both tube and gel techniques, therefore prevalence of secretory status was 0% for the three tested antigens. The concordance between microscopic and macroscopic agglutination degrees with tube method was fair (K 0.33) for DEA1 and good (K 0.63) for DEA 4. The K coefficient between tube and gel methods was poor (K 0) for DEA 1, and good (K 0.67) for DEA 4. Repeatability was 100% for both methods.
This preliminary study did not identify canine salivary secretory status for blood antigens DEA1, DEA4 and Dal in any dog analyzed. As in canine blood typing studies, the tube method showed weak agglutinations, sometimes difficult to interpret for DEA 1 antigen, and the gel inhibition method represents the most effective and most easily interpreted test for further studies on secretory status in dogs.

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