

ABC Blood Group System in Cats From Luanda (Angola)

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Background: The most important blood group system in the cat is ABC, in which cats are classified as type A, B, or C (formerly AB). Cats have antibodies against the blood type they do not have, called alloantibodies, as they do not require prior sensitization by transfusion or pregnancy. These are responsible for post-transfusion hemolytic reactions that can lead to the death of the animal if a type B cat receives type A or C blood and neonatal isoerythrolysis that occurs in blood type A kittens born to a type B queen mated to a type A male.

Type A blood is the most prevalent throughout the world. The first studies in cats without pedigree reported blood types B and C as rare. However, breed and geographic variations have been demonstrated.

Objetives: The aim of this preliminary study was to determine the prevalence of blood types A, B and C of cats without pedigree in two municipalities of Luanda province of Angola (Sub-Saharan Africa).

Materials and Methods: For this study, 46 blood samples collected to EDTA tubes from cats attended at Clínica Veterinária Casa dos Animais, Luanda, that needed blood work on their diagnostic plan were used. No blood samples were collected on purpose for this study. Blood type was only determined when there was enough blood leftover. All owners gave an informed written consent for the use of surplus blood samples. From each animal, data on gender, age and origin were collected. For A, B or C blood type determination, an immunochromatographic strip technique (QuickTest BT A+B, Alvedia, Limonest, France) (figure 1) was used following the manufacturer's instructions.

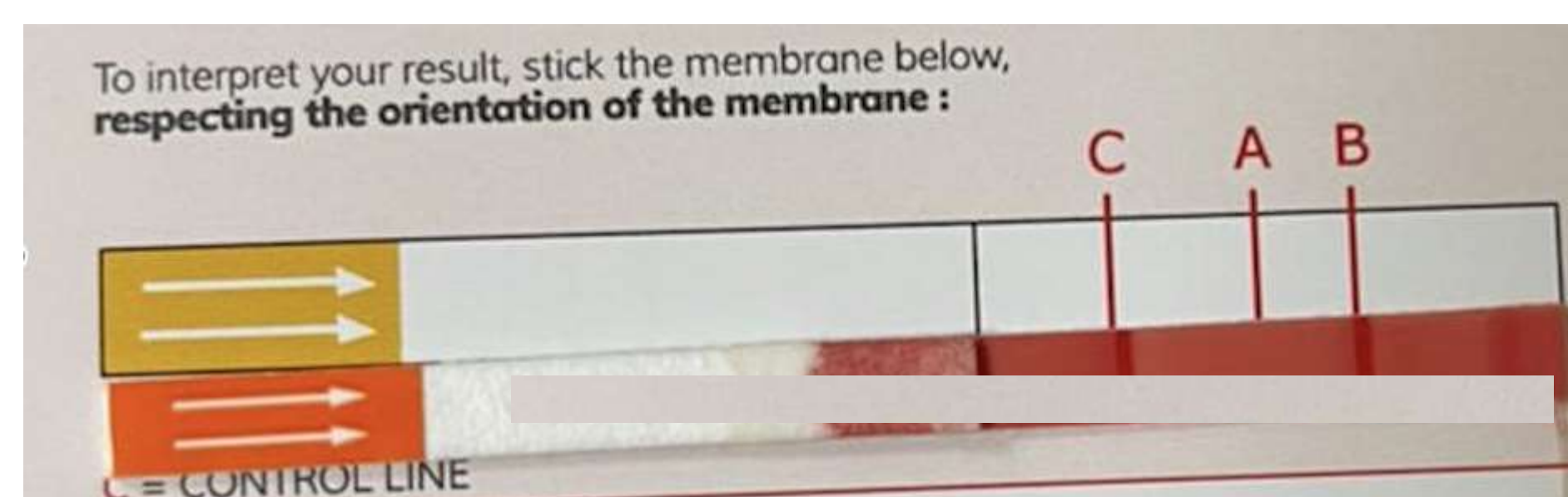


Figure 1. Results of blood typing in cats with QuickTest BT A+B (Alvedia, Limonest, France). The animal presented type B blood.

Results: The prevalence of types A, B and C in the 46 tested cats (26 males and 20 females) aged between 8 months and 17 years, was 95.7%, 4.3% and 0% respectively (table 1).

Table 1. Demographic characteristics and blood typing results of the 46 cats tested.

	Nº of cats	Type A n (%)	Type B n (%)	Type C n (%)
Gender				
Male	26	26 (100)	-	-
Female	20	18 (90.0)	2 (10.0)	-
Total	46	44 (95.7)	2 (4.3)	0 (0)

Because of the geographical variation in cat blood types and this is a local study conducted in a low number of cats, additional caution is warranted when interpreting the results, and outcomes should not be extrapolated to other geographic areas.

Conclusions: To the best of our knowledge, this is the first study on the ABC blood group system in cats carried out on the African continent. The results underscore the usefulness of regional studies to identify different prevalences of feline blood types. Blood typing should be considered a fundamental test in cats of any origin as a way of guaranteeing a safe and efficient blood transfusion and preventing neonatal isoerythrolysis.