The objective of the study was to evaluate the degree of hematomas after collection of blood in the coccygeal and jugular veins, collected by two groups, with and without experience, using three different blood collectors. The formation of hematomas was observed immediately after puncture of the veins and evaluated subjectively by scores where: 1- without bruising; 2- drop of blood; 3- swelling; 4- drop of blood plus swelling and 5- heavy bleeding plus swelling. The three different collectors used were: Traditional (C1), Vacutainer (C2) and Krev (C3). The C1 consists of a separate needle from the manifold tube. The C2 has a pickup tube separate from the needle and has a needle adapter that assists at the time of obtaining the blood. In C3 the needle is attached to the collector tube. Participated in the collection were two groups, one made up of students with experience (has knowledge of the technique or does the collection procedure constantly) and the other group formed by students without experience (has no knowledge about the collection technique). We used 150 animals from each genetic group, Nelore and Girolando (¾ Holstein and ¼ Gir), totaling 300 animals. The means when significant were compared by the Tukey test at 5%. There was a significant difference between the collection methods (P <0.05), and the C1 method caused a greater score of hematoma in the coccygeal vein than the C2 and C3 methods. There was also an interaction effect between race and groups of students, and Nelore animals presented the highest score of hematomas in the coccygeal vein. As for the Girolando animals, we observed differences between the groups of students (with and without experience), where the group of students with no experience in blood collection caused a greater score of hematoma than the group of students with experience. Regarding the score of hematomas in the jugular vein, the group with no experience caused a greater score of hematomas with the collection method C1 (P <0.01). The C3 method caused fewer hematomas in the coccygeal and jugular vein than the C1 and C2 methods.

Keywords: collection device, technological innovation

Acknowledgments: UEMS, CAPES e FUNDECT