TITLE: DETECTION OF *ENTEROBACTER SP*. IN EQUINE PLASMAS COLLECTED BY MANUAL APHERESIS AND STORED UNDER REFRIGERATION

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ABSTRACT:

In veterinary medicine, plasma can be used in cases of deficiencies in hemostasis, immunodepression and hypoproteinemia. Particularly in foals, the main application is in the treatment of failures in the passive transference of humoral immunity. Plasmapheresis is a technique that involves removal of blood from a donor, followed by separation of plasma from blood cells and reintroduction of these cells into the bloodstream of donor. Microbiological analyzes are some of the methods of quality control required in human hemotherapy, aiming adequacy to the parameters established for blood and hemoderivates, whereas this type of control is still not widely adopted in the veterinary routine. In this context, the objective of the present study was to perform a microbiological evaluation of equine plasma obtained by manual apheresis. Five plasma samples were collected from plasma-donor animals (CEUA-FZEA No. 9210041218) from municipalities in the state of São Paulo by manual apheresis and stored at 8°C for 10 days. Plasma samples were initially cultured in BHI broth for 24 hours at 37° C, followed by subculture in blood agar with subsequent incubation for 48 hours at 37° C. For samples with bacterial growth, single colony isolation, Gram staining, biochemical tests, mass spectrometry (MALDI-TOF) and 16S rRNA gene sequencing were performed. For two samples, Gram negative bacilli from Enterobacteriaceae family were obtained. In mass spectrometry, these two isolates were classified as belonging to the genus Enterobacter and BLAST analysis for the 16S rRNA gene corroborated this result with identity of 97%. In view of the preliminary results presented, this study emphasizes the need for development and implementation of microbiological quality standards also for blood components in equine veterinary medicine.

Keywords: 16S, equine, blood components, MALDI-TOF, plasmapheresis

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