Abstract

Large volumes of different electrolytes solutions are commonly used for ingesta hydration in horses with large colon impaction, but little is known about their consequences to blood acid-base balance. To evaluate the effects of PEG 3350 or enteral and parenteral electrolyte solutions on the blood gas analysis, anion gap and strong ion difference, five adult female horses were used in a 5x5 latin square design. The animals were divided in five groups and distributed to each of the following treatments: NaCl (0.9% sodium chloride solution); EES (enteral electrolyte solution), EES+LR (EES plus lactated Ringer’s solution); PEG (balanced solution with PEG 3350) and PEG+LR (PEG plus lactated Ringer’s solution). Treatments PEG or PEG + LR did not change or promoted minimal changes, while the EES caused a slight decrease in pH, but its association with lactated Ringer’s solution induced increase in AG and SID values, as well as caused hypernatremia. In turn, the treatment NaCl generated metabolic acidosis. PEG 3350 did not alter the acid-base balance. Despite it’s slight acidifying effect, the enteral electrolyte solution (EES) did not cause clinically relevant changes.

Keywords

Acid-base balance, cathartic, fluid therapy.