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Short Communication

Plasma potassium concentrations in neonatal diarrhoeic calves are correlated with serum aldosterone concentrations but not with insulin concentrations

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Highlights

- The association of plasma potassium with serum insulin and aldosterone levels in neonatal diarrhoeic calves was assessed.
- Serum aldosterone and plasma potassium concentrations were well correlated ($r_s = 0.62$) in 123 hospitalised diarrhoeic calves.
- In contrast, serum insulin and plasma potassium concentrations were only weakly correlated ($r_s = 0.22$).
- Aldosterone levels in 38 hyperkalaemic diarrhoeic calves were 15.3 times higher than in nine healthy control calves.
- Hypovolaemia likely limits the efficacy of aldosterone-induced mechanisms for potassium control in hyperkalaemic calves.

Hyperkalaemia is a clinically relevant electrolyte imbalance in neonatal diarrhoeic calves which was previously associated with severe dehydration and acidaemia. The present study assessed the association of plasma potassium (cK) with serum aldosterone and insulin concentrations, since these hormones are involved in the regulation of potassium homeostasis. Serum aldosterone ($r_s = 0.62$), but not insulin concentrations ($r_s = 0.22$) were closely correlated to cK in 123 hospitalised neonatal diarrhoeic calves. Median values for serum aldosterone

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