

Intra-operative Anaesthetic Complications In Horses With Acute Kidney Injury

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Acute Kidney Injury (AKI) is a recognised problem in hospitalised horses.¹ Many of these cases require general anaesthesia (GA) and surgery. The impact of AKI on complications during anaesthesia of horses is unknown.

A retrospective study of horses with AKI undergoing GA at a university teaching hospital between January 2016 and February 2025 was conducted. Inclusion criteria were age \geq six months and pre-operative AKI diagnosis. Anaesthetic records were searched for complications including cardiovascular; electrolyte or acid-base abnormalities; and recovery difficulties. Survival to discharge was recorded. Data was entered into a spread sheet and descriptive statistics calculated.

Eight horses with AKI were included, six horses underwent colic surgery and two for traumatic injuries. Median AKI grade (European College of Equine Internal Medicine¹) was two (range 1 - 3) and ASA score four (3 – 5). Median age 6.5 (0.5 – 24) years and body weight 440 (125 – 560) kg. All horses received intra-venous fluid pre and intra-operatively and had GA maintained with an inhalational agent. Cardiovascular complications included hypotension (three horses, 38%), tachycardia (five, 63%), and dysrhythmias (ventricular tachycardia or premature contractions) (four, 50%). Seven (88%) had at least one acid-base or electrolyte abnormality, the most common were acidaemia (six, 75%) and hyperkalaemia (four, 50%). One horse experienced complications during recovery (ataxia and lameness). Two horses survived to discharge from hospital.

Life threatening intra-operative complications are common in horses with AKI. It remains to be determined if AKI increases the frequency of these compared to other critically ill horses.

1. van Galen G, Divers TJ, Savage V, Schott II HC, Siwinska N. ECEIM consensus statement on equine kidney disease. *Journal of Veterinary Internal Medicine* 2024;38:2008-2025.

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