

## Central Lancashire Online Knowledge (CLoK)

Title	A comparison of the pharmacodynamic effects of intravenous ketamine- xylazine with alfaxalone in mute swans (Cygnus olor) presenting at a wildlife veterinary hospital
Туре	Article
URL	https://clok.uclan.ac.uk/39037/
DOI	https://doi.org/10.1016/j.vaa.2021.03.014
Date	2021
Citation	Baldrey, Vicki, Stanford, Michael and Bacon, Heather (2021) A comparison of the pharmacodynamic effects of intravenous ketamine-xylazine with alfaxalone in mute swans (Cygnus olor) presenting at a wildlife veterinary hospital. Veterinary Anaesthesia and Analgesia. ISSN 1467-2987
Creators	Baldrey, Vicki, Stanford, Michael and Bacon, Heather

It is advisable to refer to the publisher's version if you intend to cite from the work. https://doi.org/10.1016/j.vaa.2021.03.014

For information about Research at UCLan please go to <a href="http://www.uclan.ac.uk/research/">http://www.uclan.ac.uk/research/</a>

All outputs in CLoK are protected by Intellectual Property Rights law, including Copyright law. Copyright, IPR and Moral Rights for the works on this site are retained by the individual authors and/or other copyright owners. Terms and conditions for use of this material are defined in the <u>http://clok.uclan.ac.uk/policies/</u> **Table 4** Cardiopulmonary variables, time from drug injection to intubation, inspired isoflurane concentrations and anaesthetic duration in swans immediately prior to the intravenous administration of either alfaxalone (Group A) or ketamine and xylazine (Group KX) for the induction of anaesthesia. Anaesthesia was maintained with isoflurane in oxygen. Data are presented as median and interquartile range (IQR) unless otherwise stated. For details of drug doses used see Table 2 legend. *n* is the number of birds in the group. Significance was set at *p* < 0.05. Fe Iso = end tidal isoflurane concentration, *f*<sub>R</sub> = respiratory rate, HR = Heart rate, PE CO<sub>2</sub> = end tidal carbon dioxide, SpO<sub>2</sub> = peripheral haemoglobin oxygen saturation

Variable	Group A	Group KX	р
	( <i>n</i> = 27)	( <i>n</i> = 31)	
Resting HR (beats minute <sup>-1</sup> )	92	88	0.0330*
	(80-102)	(72-96)	
Resting $f_{\rm R}$ (breaths minute <sup>-1</sup> )	8	8	0.7269
	(6-10)	(6-10)	
Time to intubation (seconds) $^{\dagger}$	60	60	$0.0176^{*}$
	(60-60)	(60-90)	
HR immediately post induction (beats minute-	176	64	< 0.0001*
<sup>1</sup> )	(139-183)	(58-73)	
HR at 5 minutes post induction (beats minute-	155	68	< 0.0001*
<sup>1</sup> )	(127-180)	(61-78)	
Median HR during anaesthesia (beats minute	146	66	< 0.0001*
<sup>1</sup> )	(127-168)	(56-78)	
Number of swans with initial apnoea <sup>‡</sup>	12 (44)	1 (3.2)	0.0002*

Duration of apnoea (minutes)	0	0	0.0002*
	(0-6)	(0)	
$f_{\rm R}$ 10 minutes postinduction	12	9	$0.0049^{*}$
(if no apnoea) (breaths minute <sup>-1</sup> )	(9-18)	(8-11)	
$f_{\rm R}$ 15 minutes postinduction	13	10	$0.0010^{*}$
(if no apnoea) (breaths minute <sup>-1</sup> )	(12-15)	(6-12)	
Median $f_{\rm R}$ during anaesthesia	13	10	0.0306*
(excluding apnoea) (breaths minute <sup>-1</sup> ) <sup><math>\dagger</math></sup>	(8-17)	(8-12)	
PE'CO <sub>2</sub> immediately postinduction	42 [5.6]	45.5 [6.1]	0.4406
(if no apnoea) (mmHg )[kPa]	(33-57) [4.4-	(41.5-50)	
	7.6]	[5.5-6.7]	
PE'CO <sub>2</sub> 5 minutes postinduction	51 [6.8]	46 [6.1]	0.1511
(if no apnoea) (mmHg) [kPa]	(41.5-59.5)	(35.0-51.0)	
	[5.5-7.9]	[4.7-6.8]	
Median PE <sup>CO<sub>2</sub></sup> during anaesthesia	53.75 [7.2]	46.5 [6.2]	0.0972
(excluding apnoea) (mmHg) [kPa]	(41.63-62.75)	(37.5-52.0)	
	[5.6-8.4]	[5.0-6.9]	
SpO <sub>2</sub> immediately postinduction (%)	99	98	0.3144
	(98-100)	(98-100)	
SpO <sub>2</sub> 5 minutes postinduction (%)	99	99	0.7536
	(98-100)	(98-100)	
Median SpO <sub>2</sub> during anaesthesia (%)	99	99	0.5112
	(99-100)	(98-100)	
Vaporiser setting for isoflurane concentration	3	2	0.0001*
immediately post induction (%)	(2.0-3.5)	(1.5-2.0)	

FE'Iso 5 minutes post induction (%)	2.5	2	0.0001*
	(2.0-3.0)	(1.5-2.0)	
Median FE'Iso required during procedure (%)	2.5	1.5	$0.0001^{*}$
	(2.0-3.0)	(1.5-2.0)	
Duration of anaesthesia <sup>§</sup> (minutes)	18 (15-28)	17 (15-27)	0.7600

 $\overline{p} < 0.05$ . <sup>†</sup>Confounded value. <sup>‡</sup>Total number (percentage of the group). <sup>§</sup>Time from completion of induction drug dose to cessation of isoflurane.