



IACUC Protocol Deviation/Self Reporting Form

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Protocol Number (s): 1905A37090

Species: Feline

Number of animals involved: 1

Date (s) of protocol deviation or incident: 08/05/2021

Date of Reporting: 08/06/2021

Description of Incident: Animal was accidentally given 4.5 times dose of vecuronium during fMRI scan. Paralytic was infused intravenously at 0.1mg/kg- 2ml/min versus the intended rate of 2ml/hour. Fourteen minutes into infusion, anesthesia monitoring showed airway deficit (sudden drop in ETCO₂). Nitrous oxide was turned off, vecuronium infusion was stopped, and animal was removed from the magnet. It was given the reversal (Neostigme/Atropine) and the RAR DVM Whitney McGee was paged. After transferring animal from magnet room to the 9.4T surgery suite, the DVM was able to do an exam and noted audible lung sounds indicating pulmonary edema. Fluid was removed from the ET tube and flushed from the 2-way valve/gas lines. Furosemide (4mg/kg) was given to help remove fluid from lung fields and animal was maintained on the ventilator and low isoflurane under DVM supervision. Neostigme was repeated and slight improvement in recovery was noted- minor spontaneous breathing and significant improvement of lung sounds per DVM. When DVM attempted to take the animal off the ventilator, the animal stopped breathing spontaneously and no heartbeat could be heard for about one minute. When reconnected to the ventilator, the heartbeat returned, faintly and then normally about 5-10 minutes afterwards. RAR DVM Giuseppe Del'Anna came for a second consult- finding mild lung sounds consistent of pulmonary edema. He was concerned about hypovolemia and hypoxemia resulting in organ damage, diagnosing the cat with a very poor prognosis of recovery. He recommended euthanasia versus continued attempt at recovery due to strong likelihood of her not surviving. With lab compliance, RAR DVM Whitney McGee administrated Euthasol solution and animal passed quickly.

Corrective Action: All lab members conducting animal studies will review the relevant protocol and SOP before each experiment to be familiar with the drug dosages and procedures. The drug/agent calculation and infusion rate will be confirmed before administration by animal technician and researcher(s) performing the experiment. A standardized drug reference sheet will be available for all lab members involving the study to ensure consistency of the

medications/doses used in each study. The Lab will continue to work with RAR and page the DVM as needed to achieve best anesthesia practice techniques and recovery for lab animals.

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