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Clinical Sedation of Alaskan Phocid Seals

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Abstract

The Alaska SeaLife Center completed eighty-three successful sedation procedures from 2014-2019 with sick seals handled during rehabilitation and healthy seals handled for sampling and diagnostic procedures in a clinical setting in Seward, AK. Sedation protocols are reported for Alaskan spotted (*Phoca largha*), ringed (*Pusa hispida*), and bearded (*Erignathus barbatus*) seals treated in a clinical setting at the Alaska SeaLife Center, Seward, AK. Combinations of midazolam hydrochloride 5 mg/mL (AKORN Inc, Lake Forest, IL) and butorphanol tartrate 10 mg/mL (Patterson Veterinary, Greenly, CO) delivered via intramuscular injection were used to induce sedation for up to 2.5 hours. In cases of general anesthesia following initial sedation, a single lumen 20 g, 13 cm catheter[1] (central venous catheter J1040, Jorgensen Laboratories, Inc, Loveland, CO) was placed within the dorsal sinus, and isoflurane gas anesthesia (Patterson Veterinary, Greenley, CO) was administered at vaporizer setting of 0.5-2.0% via endotracheal tube[2]. Typically, sedation was discontinued with an intramuscular injection of naltrexone 50 mg/mL (ZooPharm, Laramie, WY) at a dosage range of 1.0-2.0 mg per 1 mg of butorphanol. This reversal agent allowed for a smooth, calm recovery and immediate improvement in respiratory rate and oxygenation. The development of chemical sedation protocols in well controlled, clinical settings has enabled safe and predictable examination, sampling, and diagnostics of phocid seals, including Arctic species for which few veterinary data are available.

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