BEHAVIORAL MODULATORS IN ZOOLOGICAL SPECIES

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Behavioral modulators are sometimes employed in zoological species to minimize or limit aggression; achieve tranquilization or calming in transiently stressful situations and are frequently combined to exert both an immediate and a prolonged effect. These include situations when repeated handling or darting is necessary for treatment, animals are relocated within the zoo to new exhibits or holding areas, or animals are shipped to another institution. Nervous or excitable species or individuals may not respond to these temporary episodes as well as other conspecifics and for these individuals the stress associated with these procedures for can be decreased through the use of appropriate pharmacologic intervention.

When attempting to introduce aggressive animals it is sometimes advisable to administer short acting neuroleptics alone, or in combination with long acting neuroleptics. The use of azaperone in non-domestic suids (babirusa, red river hogs) has been very successful at facilitating introductions of initially incompatible animals in several zoos.

Medical treatments to assist with introductions must be performed concurrently with optimal animal management procedures such as gradual familiarization of the animals to be introduced and appropriate timing of the introduction relative to the reproductive cycle to be most effective.

Expressions of stereotypic behaviors in zoological species are complicated phenomena. When they occur, they need to be addressed at many levels, including behavioral and environmental enrichment, animal management steps, adjustments in the social structure of the group, and occasionally by pharmacologic therapy. Fluoxetine has been used successfully to minimize stereotypic pacing in polar bears and other stereotypic behaviors in non-domestic felids. Short acting neuroleptics alone, or in combination with long acting neuroleptics, have also been used to minimize stereotypic behaviors.

Animals, especially the great apes (orangutan, gorilla, and chimpanzee) may become quite excitable prior to darting. Premedication with diazepam may be helpful in calming to decrease the anxiety associated with the procedure and to facilitate easier darting that is less stressful for both the animal and the clinician.

Animals that are anxious due to acclimation to a new exhibit, new enclosure mates, or undetermined causes may be treated with chlorpromazine, diazepam, haloperidol, or long acting neuroleptics in an attempt to decrease their anxiety. Frequently, higher doses will initially be required to achieve an appropriate effect with subsequent tapering of doses to gradually wean the animal off the medication.

Although behavioral modulators are frequently employed in zoological species, the frequency of use greatly exceeds the specific published reports of these treatments. Prior to initiation of therapy, it is recommended that the practitioner not only review published literature, but also to contact an experienced zoological veterinary practitioner for recommendations of appropriate drugs and doses for the specific species, situation, and desired effect. In addition, there is individual variation in response to these medications so it is frequently necessary to adjust doses and tailor the dose based upon the individual animal response.

REFERENCES


