



STANDARD OPERATING PROCEDURE 804 HUMANE INTERVENTION POINTS TO RODENT MODELS INVOLVING PARALYSIS

1. PURPOSE

This Standard Operating Procedure (SOP) provides guidelines on humane intervention points for rodent research models that involve progressive ascending paralysis.

2. RESPONSIBILITY

Principal investigator (PI) and their research staff.

3. CONSIDERATIONS

- 3.1 Rodent models involving progressive ascending paralysis include experimental autoimmune encephalomyelitis (EAE) and other neurodegeneration models, such as amyotrophic lateral sclerosis (ALS), stroke, and others.
 - 3.2 Paralysis typically progresses from the tail to the hind limbs, then to the forelimbs, and is occasionally followed by urinary incontinence.
 - 3.3 Scoring mechanisms for disease progression are part of the experimental data gathering and valuable tools for determining humane intervention points and monitoring frequency.
 - 3.4 Body weight and body condition scoring should be evaluated in conjunction with the paralysis scoring.
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4. PROCEDURES

4.1 Paralysis scoring:

SCORE	CLINICAL SIGNS
0	No disease, no apparent changes in motor function.
1	Lack of tail tone (flaccid tail) but normal gait and ability to climb.
2	Limp tail and mild hind limb weakness. They may have difficulty grasping or climbing up from the underside of a cage cover grid and may misstep on the top of a cage cover. Animals may appear ataxic or clumsy; their balance is poor, and animals exhibit poor righting reflexes.

3	Severe hind limb weakness/partial hind limb paralysis. May drag hind limbs. The animal cannot hang on the underside of a cage cover but still moves spontaneously.
4	Paralysis of one or both hind limbs and little or no spontaneous movement. The animal is unable to right itself in 20 seconds.
5	Quadriplegia or moribund stage

4.2 Recommended intervention points:

- 4.2.1. Weight loss exceeding 20% of baseline body weight.
- 4.2.2. Body condition score (BCS) less than 2.
- 4.2.3. Score of 0, 1, or 2: No treatment required.
- 4.2.4. Score of 3 or 4: Provide food at the bottom of the cage and long sipper tubes for water bottles. Palpate the abdomen for urinary bladder condition and assist in urination by applying gentle pressure if it is complete.
- 4.2.5. Score of 4: Euthanasia if the animal cannot be right in 20 seconds.
- 4.2.6. Score of 5: Euthanasia.

4.3 Frequency of Monitoring:

- 4.3.1. Animals should be observed daily.
- 4.3.2. Score of 0, 1, or 2: scoring and body weights weekly.
- 4.3.3. Score of 3: Score and body weights twice weekly.
- 4.3.4. Score of 4: Score and body weights daily.

4.4 Recordkeeping:

- 4.4.1. Monitoring is the responsibility of the PI and research staff.
- 4.4.2. A Humane Intervention Monitoring Log may be requested by the Facility Animal Care Committee.
- 4.4.3. Log all monitoring activities, observations, and paralysis scores.

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Written on (dd-mm-yyyy): 01.11.2022

Revised on (dd-mm-yyyy): 13.03.2023