COMMON CLINICAL CONDITIONS IN RATS AND MICE

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RATS

Ringtail

Presentation and Signs
Annular constrictions of the tail and/or digits. This can be mild with minimal swelling or severe leading to necrosis of the distal extremeties.

Diagnostics
Physical exam

Treatment
Often associated with low humidity, husbandry issues should be addressed. Carefully snipping the constricting rings and moisturizing the affected area can be beneficial (lanolin has been shown to be effective). Necrotic toes or tail ends may need amputation.

Malocclusion

Presentation and Signs
Affected rats may present with inappetance or weight loss. Severe cases may result in oral trauma due to the misaligned incisors.

Diagnostics
Physical exam is sufficient.

Treatment
Trimming of the teeth with a dental burr (under anesthesia) and addressing any of the secondary conditions (oral ulceration or infection) with appropriate pain management or antibiotics.
Mammary Tumors

**Presentation and Signs**
The most common neoplasia of rats, some strains have up to a 50% incidence. Most are benign fibroadenomas.

**Diagnostics**
Physical exam, biopsy or FNA.

**Treatment**
Some rats can manage very well with quite large tumors. Surgical excision is possible, but the tumor is likely to recur.

Pituitary Adenoma

**Presentation and Signs**
Unilateral exophthalmos with or without chromodacryorrhea may occur once the tumor reaches sufficient size.

**Diagnostics**
Clinical signs and/or post-mortem exam.

**Treatment**
None.

Sialodacryoadenitis virus

**Presentation and Signs**
Caused by a coronavirus, sialodacryoadenitis has two forms: transient in endemic colonies, or a more severe, sudden onset in naïve rats exposed after weaning. Transient infections result in animals with brief (less than a week) of ocular signs such as conjunctivitis. In the more severe form, animals display nasal and ocular discharge, significant cervical swelling (enlarged salivary glands), and more severe ocular signs such as photophobia and corneal ulcers.

**Diagnostics**
Antibody testing can be used seven days post-infection. If a widespread outbreak in a colony, post-mortem testing such as PCR of the salivary gland can provide a diagnosis.

**Treatment**
For breeding animals, suspension of breeding until signs resolve and viral shedding is complete (6-8 weeks). For individual animals, supportive care and treatment for secondary lesions as appropriate.

**Mycoplasma pulmonis**
**Presentation and Signs**
Respiratory signs prevail with ocular and nasal discharge, rales and dyspnea, chromodacryorrhea and possible headtilt.

**Diagnostics**
Culture or PCR of the respiratory exudate in conjunction with clinical signs.

**Treatment**
Tetracycline may suppress clinical signs but full resolution/clearing of the infection is unlikely.

**Pneumocystis carinii**

**Presentation and Signs**
Previously called ‘rat respiratory virus,’ *P. carinii* causes interstitial pneumonia. There may be no clinical signs and normal, otherwise healthy rats typically clear the infection on their own.

**Diagnostics**
Post-mortem only—PCR of lung tissue or appropriate histological staining.

**Treatment**
Animals typically clear the infection on their own

**MICE**

**Pinworms**

**Presentation and Signs**
Animals with a heavy worm burden of either *Syphacia obvelata* or *Aspiculuris tetraptera* can display rectal prolapse, intussusception and/or fecal impaction.

**Diagnostics**
*S. obvelata* eggs can be seen via a tape test of the perineum while those from *A. tetraptera* can be found in the feces.

**Treatment**
Various anthelminthics are effective including fenbendazole and ivermectin.

**Fur mites**

**Presentation and Signs**
Three species of mites may commonly infest mice: *Radfordia affinis*, *Myobia musculi* and *Myocoptes musculinus*. Animals are puritic and look scruffy. Excoriations progressing to ulcerations and pyoderma are possible sequelae.

**Diagnostics**
Hair plucks are an effective way to identify fur mites. Select samples from less-groomed areas such as the head or neck, or between the shoulder blades. PCR testing can be performed via swabbing of the animal or its cage environment.

**Treatment**
Ivermectin is effective in the drinking water as are topical treatments such as selemectin. Trimming the toenails will lessen the probability of progression of self-trauma.

*Mycoplama pulmonis*

**Presentation and Signs**
Respiratory signs are resultant to infection, including rhinitis, otitis media and chronic pneumonia. Systemic signs, including ruffled hair coat and lethargy may also be present.

**Diagnostics**
Clinical signs in conjunction with advanced diagnostics (culture and PCR from respiratory lavage fluid) can give a definitive diagnosis.

**Treatment**
Tetracycline can eliminate clinical signs in affected animals but will not clear the infection.

**Malocclusion**

**Presentation and Signs**
Affected mice may present with inappetance or weight loss. Severe cases may result in oral trauma due to the misaligned incisors.

**Diagnostics**
Physical exam is sufficient.

**Treatment**
Trimming of the teeth with sharp scissors and addressing any of the secondary conditions (oral ulceration or infection) with appropriate pain management or antibiotics.

**Barbering**

**Presentation and Signs**
Hair loss without associated skin trauma or irritation is often due to barbering. If multiple animals are housed together, the ‘culprit’ will have an intact hair coat and whiskers while the other animals are missing hair and/or whiskers that has been neatly shorn off.

**Diagnostics**
Clinical signs

**Treatment**
Removal or separation of the aggressor will result in hair regrowth in the affected animals.

**Fight wounds**

**Presentation and Signs**
Wounds and skin trauma around the head or face and/or tail and genitals. Male mice will often fight if combined after weaning.

**Diagnostics**
Physical exam.

**Treatment**
Remove the aggressor (animal without wounds). Treat wounded animals as appropriate with topical or systemic antibiotics and/or analgesics.