

Rodent Acariasis (Mite infestation)

Agent, Species: *Myobia musculi*, *Myocoptes musculus*, *Radfordia affinis*

Host: Mouse and Rat

Transmission: Direct contact

Clinical disease: Infestation may be asymptomatic or may cause wasting; scruffiness; pruritus; patchy alopecia, which may be extensive; accumulation of fine bran-like material, mostly over affected areas; self-trauma to the point of excoriation, and secondary pyoderma.

Diagnosis: Microscopic exam of hair pluck, tape test to identify mites.

Prevention and treatment: Commonly treated using topical application of permethrin, ivermectin or dichlorvos (Atgard pellets). Strict sanitary procedures, use of filter hoods, and regular examinations during parasiticide treatment of infected animals may control the parasitism.

Research complication: Mite infestation has reportedly caused secondarily amyloidosis; altered behavior; selective increases in immunoglobulin G1 (IgG1), IgE, and IgA levels and depletion of IgM and IgG3 levels in serum; lymphocytopenia; granulocytosis; increased production of IL-4; and decreased production of IL-2. These immunologic changes are consistent with a Th2-type response and can have marked systemic consequences.

References

Percy and Barthold 2001. Pathology of laboratory rodents and rabbits, second edition. Ames: Iowa State University Press.

Flynn, R.J. 1973. Parasites of Laboratory Animals. Ames: Iowa State University Press.

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