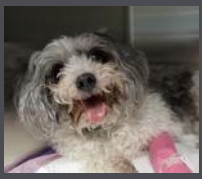
5 Things You Should Know About Tick Paralysis

The Neurotoxin

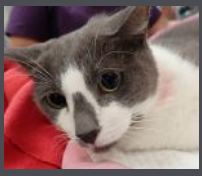
Tick paralysis in Australia is most commonly caused by Ixodes holocyclus, that produces a potent pre-synaptic neurotoxin.
The toxin inhibits release of acetylcholine from motor neurons, producing progressive lower motor neuron paralysis over several days when the female tick feeds.
Death from tick paralysis occurs due to respiratory muscle paralysis and/or complications of reduced gag and swallow reflexes - most notably aspiration pneumonia



Clinical Signs

Clinical signs may be subtle and non-specific, but progress to those of progressive weakness and respiratory difficulty.
Clinical signs include (but are not limited to)...

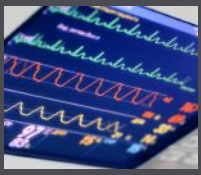
- altered vocalisation
- weakness and lethargy
- vomiting or regurgitation
- excessive salivation
- respiratory distress



Risk Factors for Mortality

In both cats and dogs, risk factors for mortality and morbidity include

- delayed time from onset of clinical signs to presentation
- increased severity of symptoms (gait and motor score)
- the presence of co-morbidities
- delayed removal of ticks, or multiple ticks
- delayed administration of tick antisera
- advancing age



Treatment Priorities

There are 2 main priorities in the management of tick paralysis - tick removal and antisera administration, and the provision of high-quality supportive care.
Tick antisera will neutralise circulating tick toxin, but does not reverse clinical effects of toxin already bound to nerve endings
Supportive care is crucial and can involve

- oxygen supplementation, airway protection
- ventilation therapy in patients with severe respiratory compromise
- sedation, gut motility control, oral hygiene and nursing care

Prevention is Better than Cure

Year-round tick presentation is essential in endemic regions, especially during peak seasons (spring to summer).
The most effective acaracides include fluralaner and afoxolaner.
An injection containing fluralaner has been released (Bravecto Quantum) which has activity against paralysis tick for 12 months.
Other preventative treatments include imidacloprid/permethrin combinations, among other products.
Daily tick searches, especially following outdoor activity, can increase chances of early detection and removal of ticks, prior to clinical signs.

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