

Feline Infectious Peritonitis (FIP) and Feline Enteric Coronavirus (FECV)

A PowerPage Presented By



FIP is a deadly viral disease of young cats. Despite its name, the virus is not restricted to the peritoneum. The pathogenesis is complex, involving mutation of a common virus known as feline enteric coronavirus (FECV). Diagnosis of FIP can be challenging as there is no single effective diagnostic test for the disease and it has different presentations. This PowerPage seeks to point out the ways this disease can present in cats and the clues that lead you to this diagnosis.

Key Points

- A disease of younger cats: 6 months to 2 years most commonly
- FIP develops from mutation of feline enteric coronavirus (FECV). Nearly all cats are exposed to FECV but only a fraction will develop FIP
- There is a dry form and effusive form of the disease
- There is no single diagnostic test to diagnose FIP but there are many potential clues that should lead you to suspect it
- Treatment is primarily supportive as no specific treatment exists

Transmission

From direct contact, likely ingestion or inhalation of the virus. The virus is relatively unstable outside of the host and susceptible to most detergents but may persist up to 2 weeks.

Clinical Signs

- 2 forms of the disease
 1. Effusive (Wet)
 2. Dry
- Effusive form
 - Characterized by widespread vasculitis
 - Leaking of **protein and fibrin rich fluid** into pleural and peritoneal cavities
- Dry form
 - Granulomatous reaction in tissues
 - May involve nervous system, kidneys, eyes, lymph nodes or other sites
 - More difficult to diagnose

Diagnosis

- Effusive Form - **Fluid analysis** is key to diagnosis
 - Is typically **dark yellow, sticky and viscous**
 - Non septic, **high protein (globulins)**, A:G ratio <0.4
- Dry Form - Challenging diagnosis but some common findings include
 - Mature neutrophilia, lymphopenia, non-regenerative anemia and a **hyperglobulinemia**
 - Serology for feline coronavirus is available but can be difficult to interpret
 - Gold standard of diagnosis remains **histopathological examination** of biopsied tissues

- Characteristic changes include **perivascular pyogranulomatous inflammation**. Often involving ileum, colon, mesenteric lymph nodes and liver

Treatment

- It is unlikely that you will be asked much about treatment of FIP since options are limited
- **No effective treatment/cure**
 - Cyclophosphamide (Cytoxan) and corticosteroids are palliative and may reduce signs
 - Occasional reports of treatment with interferon gamma or pentoxifylline

Prevention

- Vaccine:
 - Licensed for use in kittens over the age of 16 weeks. However, kittens may become infected after maternal antibodies wane at 4-6 weeks
 - The current vaccine can result in false positive FECV titers
- Best prevention measures are good cattery procedures
 - Hygiene is essential. Good nutrition, general health status, sanitation and avoiding overcrowding
 - This disease may be a problem even in a well maintained cattery

References and Links

Ettinger and Feldman, Textbook of Veterinary Internal Medicine, 5th edition pp. 438-443

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