

Takuo Ishida - DVM, PhD., Dip. JCVF - Medical Director, Akasaka Animal Hospital President, Japanese Board of Veterinary Practitioners - Vice President, Japanese Animal Hospital Association - Certification Committee Member, Japanese Veterinary Cancer Society - Akasaka Animal Hospital - 4-1-29 Akasaka - Minato-ku, Tokyo 107-0051 - JAPAN - E-mail: t_ishida, mac.com



Clinical case 2

A clinical case of wet FIP treated with feline omega interferon

Case history

A **sixteen year-old** castrated male **domestic shorthair** cat was referred with difficulty in breathing, lethargy and loss of appetite for one week. The animal was negative for internal or external parasites, and was regularly vaccinated until the age of twelve years against feline calicivirus, feline herpesvirus and feline panleukopenia virus. The cat lived strictly indoor with two other cats and was fed with canned and dry cat food.

Physical examination

A **general clinical examination** showed fever (40°C), and the cat was depressed. The mucous membrane was slightly pale. Respiratory function was modified: a rapid and shallow breathing was observed, with a dull sound on percussion. The respiratory auscultation showed a weak but present bronchovesicular sound.

Breed:

Domestic shorthair cat (DSH)

Sex:

castrated male

Age:

16 years

Consultation purpose:

breathing difficulty, lethargy, loss of appetite

Main symptoms:

fever, depression, pale mucous membranes, rapid and shallow breathing

Differential diagnosis

Considering the animal's general condition and its clinical signs, presence of pleural effusion was suspected. Possible differential diagnoses for feline pleural effusions included the following conditions:

- FIP (Feline Infectious Peritonitis) (effusive form)
- Tumors such as lymphoma or thymoma
- Pyothorax
- Chylothorax
- Hypoalbuminemia
- Heart failure (such as pericardial effusion)

Complementary examination

A **thoracic radiography** was performed and showed (*photo 1*):

- inter-lobar scissuras,
- no mediastinal mass was observed.

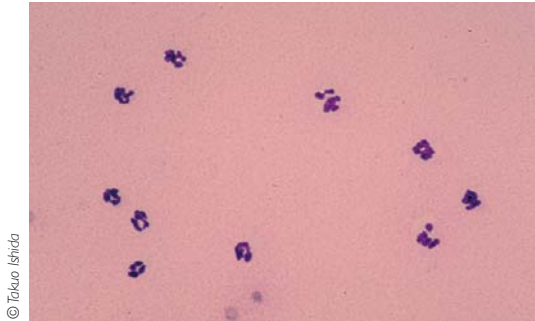


(*Photo 1*)
Thoracic radiography
showing inter-lobar
scissuras.

© Takuo Ishida

All these signs were compatible with a **pleural effusion**.

The **fluid** was then tapped for analysis (*photo 2*). It was clear yellowish with turbidity and



© Takuro Ishida

(Photo 2)
Low cell count
analyzed fluid.

was inflammatory with a relatively low cell count. The inflammatory cell population was mixed with non-degenerate neutrophils, macrophages and lymphocytes. The albumin:globulin ratio (A:G) was 0.6 and the specific gravity (SG) was 1.027.

A **complete blood count** (CBC) showed a haematocrit of 27%. The **blood smear** evaluation showed neither polychromasia nor anisocytosis of the erythrocytes which led to a conclusion of a slight non-regenerative anemia.

An **electrophoresis of serum proteins** was carried out and showed a polyclonal gammopathy. The feline coronavirus (FCoV) antibody assay by an immunoperoxidase method showed a high titer of 1: 12 800.

Diagnosis

Based on clinical signs and the results of the different complementary examinations (non-regenerative anemia, polyclonal gammopathy, high FCoV antibody titer, characteristic effusion with a low A:G), the suspicion of an FIP of effusive form was confirmed.

Treatment

A thoracocentesis was carried out followed by an intrathoracic injection of 1 mg/kg b.w. of **dexamethasone**.

A specific treatment with subcutaneous injections of **feline omega interferon** at 1 MU/kg b.w. every other day was started as an **induction therapy**.

A standard glucocorticoid regimen (prednisolone 2 mg/kg b.w. once a day) was given orally in conjunction with the interferon treatment.

Follow-up

The cat was examined one week later and the disappearance of pleural effusion was observed.

The **maintenance stage** was started with a reduced frequency of **feline omega interferon** of once every week with the same dosage for 12 months.

Prednisolone was continued orally at 1 mg/kg b.w. once a day for 2 months, and then at 0.5 mg/kg b.w. every other day for 10 months. Treatment was stopped at 12 months, when the serum FCoV antibody titer was 1:1 600.

Results and prognosis

The treatment was stopped at 12 months and the patient was monitored every 6 months. There was no evidence of recurrence 3 years later. The cat remains healthy and is still alive 3 years after the diagnosis of FIP (effusive form).

Conclusion

Once clinical signs appear, cats with the effusive (wet) form of FIP generally live for a few weeks to 2 months without any treatment, and up to six months with a conventional treatment (corticosteroids and cyclophosphamide). The interferon therapy in combination with corticosteroids showed a significant therapeutic effect on this particular case since the cat is still alive and in a good general health condition 3 years after the beginning of treatment.

Protocol

FELINE INFECTIOUS PERITONITIS (wet) (form): Feline Omega Interferon protocol

1

PRIMARY TREATMENT

Drainage of the effusion liquid
One injection (*in situ*) of dexamethasone
1 mg/kg

Induction stage (the day after)

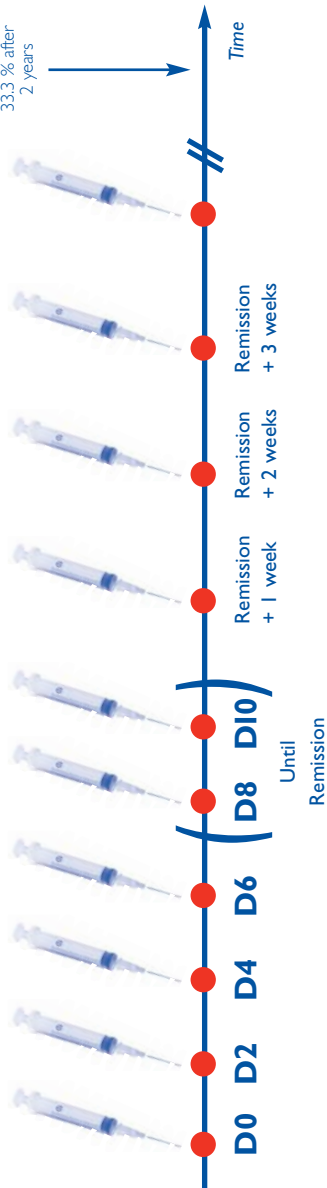
Feline omega interferon
1 MU/Kg, SC, eod until remission
(4 injections minimum)
+ prednisolone PO: 1 mg/kg, twice daily

2

Maintenance stage (after remission)

Feline omega interferon
1 MU/kg, SC once a week
+ prednisolone PO, with decreasing
doses from 2 mg/kg twice daily to
0.5 mg/kg eod

Good recovery*
Expected survival rate:
33.3 % after
2-5 months
33.3 % after
2 years



Remission: disappearance of radiographic and/or echographic signs of effusion

*Reference:

ISHIDA T. et al. (2004)
Recombinant Feline Interferon Therapy of
Feline Infectious Peritonitis. JFMS, 6, 107-109.