

# Treatment of cat flu uses a single supplement based on colostrum, probiotics and prebiotics (Felostrum)

Dwi Budiono<sup>1,2,\*</sup>, Ivan Taufiq Nugraha<sup>3</sup>, Pradnya Calista<sup>4</sup>, Kukuh Amru Dhiya Rahmat<sup>4</sup>, Hendri Zonathan<sup>4</sup>

<sup>1</sup> Program of Veterinary Paramedic, College of Vocational Studies, IPB University

<sup>2</sup> Depok Pet Center Animal Clinic, Jl. H. Abdul Gani II, Kalibaru, Kec. Cilodong, Kota Depok, Jawa Barat

<sup>3</sup> PT SUTAN Vet Medika, Bogor

<sup>4</sup> Student of Program of Veterinary Paramedic, College of Vocational Studies, IPB University

**ABSTRACT:** Flu in cats is an upper respiratory tract infection caused by viruses and bacteria of various ages. Prevention and control of vaccinations are still not widely practiced. One alternative is to provide a single supplement of colostrum, probiotics, and prebiotics. This paper reports the handling of flu cases in 2 cats aged six months (Cio) and eight months (Kaori) at the Depok Pet Center Clinic using colostrum-based supplements, probiotics, and prebiotics. A single supplementation of colostrum, probiotics, and prebiotics was carried out for seven days, and the condition of both cats showed changes. The condition of Cio's cat improved on the third day, while Kaori's cat showed less frequent sneezing and reduced concentration and volume. On the seventh day, both cats were in good condition.

**Keywords:**

flu, cat, colostrum, prebiotic, probiotic

## INTRODUCTION

Flu in cats is a disease caused by Feline Herpesvirus type 1 (FHV-1) and feline calicivirus (FCV) (Andarini *et al.* 2021). The clinical symptoms of this disease include increased body temperature, sneezing, increased production of nasal mucus, and watery eyes, and can be accompanied by bacterial infections (Monne-Rodriguez *et al.* 2017). Cats of any age, sex, or breed are susceptible to infections (Henzel *et al.* 2012). Transmission of the cat flu occurs very quickly in crowded environments, such as abandoned animal shelters, through direct and indirect exposure (Legendre *et al.* 2017).

Cat flu prevention and control activities are currently limited to vaccinating and isolating sick animals (Borland *et al.* 2020). The presence of antigenic variations and virus mutations reduces the effectiveness of both methods. In addition, individual responses to vaccination can vary. Therefore, finding more innovative and adaptive therapeutic and prevention alternatives is essential. This paper reports one approach that can be taken: single supplementation based on colostrum, probiotics, and prebiotics.

## CASE

**Signalement and Anamnesis:** Two male cats, Cio and Kaori, aged 6 and 8 months, respectively, were brought by the owner to the clinic. The Cio cat complained of mild sneezing accompanied by symptoms of clear nasal discharge, liquid consistency, small volume, and infrequent sneezing. Next, Kaori's cat experienced moderate flu with symptoms of

brown nasal discharge, liquid concentration, low volume, and frequent sneezing. Information from the two cat owners, Cio and Kaori, who interacted with stray cats. **Physical examinations:** rectal temperature, respiratory rate (RR), heart rate (HR), and capillary refill test (CRT). **Diagnoses:** Cat flu. **Treatment:** Single supplementation based on colostrum, probiotics, and prebiotics (felostrum).



Figure 1. Condition of discharge on the cat's nose. Cat Cio on (A) Day 1, (B) Day 3, and (C) Day 7; Cat Kaori on (D) Day 1, (E) Day 3, and (F) Day 7.

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## RESULTS AND DISCUSSION

The parameters observed were daily physiological conditions, frequency of sneezing, and condition of the nasal mucus, including colour, consistency, volume, and frequency. Physical examination and nasal discharge and sneezing of patient cats before and during therapy using Felostrum were shown on the Table 1 and Table, respectively. A single supplementation of colostrum, probiotics, and prebiotics was administered for seven days. The physiological condition was checked (Table 1), and supplementation was administered once a day. On the first day, the cat experienced frequent sneezing accompanied by a clear, liquid, low-volume discharge with a moist and slimy nose (Figure 1, Table 2). The Cio cat improved on the third day with a moist nasal condition and no runny nose, and the frequency of sneezing decreased (Table 2). On the seventh day, the condition found was that there was no runny nose and there was no frequency of sneezing.

On the first day, Kaori's cat experienced considerable sneezing accompanied by brown nasal discharge, liquid concentration, and low volume. After the supplement was administered on the third day, the Kaori cat showed progress in the form of reduced sneezing frequency, concentration, and volume. On the seventh day, Kaori cats were found to have no runny nose, and the frequency of sneezing was infrequent (Figure 1, Table 2). The cat's condition illustrates that colostrum, probiotic, and prebiotic supplementation treatment administered once a day for seven days can help the flu cat's health recovery by increasing the immune system.

Treatment management for Cio and Kaori cats is performed by administering a single supplementation of colostrum, probiotics, and prebiotics to treat the cat flu by utilising immunomodulatory interventions and strengthening the microbiota. Colostrum, a rich source of antibodies and growth factors, can enhance the immune response against cat flu-

Table 1 Results of physical examination of patient cats before and during therapy using Felostrum

Patient name	Day	Temp (°C)	Respiration rate (x/min)	Heart rate (x/min)	Capillary refill test (s)
Cio	1	38.4	44	140	< 2
	3	38.6	28	150	< 2
	7	38.3	32	150	< 2
Kaori	1	37.2	32	132	< 2
	3	38.8	36	144	< 2
	7	38.2	32	150	< 2

Table 2 Results of examination of nasal discharge and sneezing in patient cats before and during therapy using Felostrum

Patient name	Day	Nasal mucus			Sneeze frequency
		Colour	Consistency	Volume	
Cio	1	Pellucid	Aqueous	++	+++
	3	n.a.	n.a.	-	+
	7	n.a.	n.a.	-	-
Kaori	1	Tawny	Aqueous	+++	+++
	3	Pellucid	Aqueous	++	++
	7	Pellucid	Aqueous	+	+

Note: n.a.=not available; score - = no mucous or no sneeze; score + = small or rare; score ++ = medium volume or frequent; score +++ = voluminous or very frequent.

causing agents (Gore *et al.* 2021). Probiotics benefit intestinal bacteria or microbiota by improving the immune system of cats. Prebiotics, as nutrients for intestinal microbes, can increase the growth of beneficial bacteria, contributing to the stability of the intestinal microbiota ecosystem and immune response capabilities (Benyacoub *et al.* 2003).

The improvement in the immune system in the two cats led to an improvement in their health condition. In this case, increased immunity in cats occurs in two ways. The first way is through the growth factors contained in colostrum, which can increase the number of white blood cells. In addition, colostrum contains many proteins that improve immunity (Gore *et al.* 2021). The second method is to improve the condition of the cat's digestive tract with prebiotics and probiotics. According to Benyacoub *et al.* (2003), administering probiotics to pets has increased the body's immunity.

## CONCLUSION

The results of the treatment showed that flu cats that were given colostrum, prebiotic, and probiotic supplementation for seven days experienced an improvement in their health condition as indicated by reduced nasal discharge, watery eyes, and frequency of sneezing compared to the condition on the first day.

## AUTHOR INFORMATION

### Author for Correspondence

\*DB: dwibudiono21@apps.ipb.ac.id

Depok Pet Center. Jl. H. Abdul Gani II, Kalibaru, Kec. Cilodong, Kota Depok, Jawa Barat, INDONESIA.

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