

Feline Immunodeficiency Virus in Domesticated and Non-domesticated Cats

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-What is FIV?

Feline Immunodeficiency Virus (FIV) is first discovered in the United States in 1986. This is a type of lentivirus that causes Feline AIDS. It belongs to the same family of HIV. Clinical manifestations can be divided into several phases. It starts from so-called Acute Phase, one to two months after the transmission, showing the symptoms of mild dullness, anorexia, depression, etc. The next phase is asymptomatic since the symptom of the disease decrease or disappears and all the cats remain viremic for life, therefore, it also known as carrier phase. Period during this phase can be variable, which makes it hard to catch the disease unless individuals get tested. One can even end its life without having further phases and simply die because of the age, yet the average is up to three years until they proceed to the next phase. After the carrier phase, there are three possibilities; Persistent Generalized Lymphadenopathy (PGL), AIDS related complex (ARC), and Feline AIDS (FAIDS). The disease can go through the phases in order or can skip one or both of the phases and reach to the FAIDS, which is the most serious stage of the disease. Once the patient gets to the final stage, the life expectancy is one year or less. (Bendinelli M. et al 1995)

-Why is it important?

This endemic disease is not only in domestic cats, but also in non-domestic cat species such as African lions, Pumas, and Pallas's cat. FIV is highly species specific and it is said that transmission of FIV between feline species is infrequent as well. One of the studies, however, showed that FIV was transmitted from domestic cats to one of non-domestic subspecies leopard cat in Tsushima Island in Japan. (Nishimura Y, et al 1999) The Tsushima Cat is currently recognized as one of the endangered

species living in Japan. Over the years, its population has declined due to land development and the building of roadways. Although cars being one of the major killers of the cats, introducing the FIV to the Tsushima cat from local domesticated cats is also enhancing the decline of the population.

-Discussion

Since most of cat owners let them go in and out, the cats can spend lot of the time exploring their town, which means that there is higher risk of getting infected and of distributing the pathogens, comparing to canine disease where dogs are kept in a house or a yard. In order to minimize risk of getting and distributing FIV, one of the species survival plan (SSP) in cheetahs, *Acinonyx jubatus*, in North America (Grisham J. et al 1997) can be applied similarly. Here the SSP was made specifically for captive cheetahs, but it can also be used for domesticated cats. For example, all animals over six months need to be tested. This will enhance the owner to have FIV test for own cats so that there will be higher chance of the disease to be found. Developing more sensitive and specific test for FIV is also important. The vaccinated cats result as FIV+ with current test, and also kittens from vaccinated mother will be FIV+ as well. It is impossible to know whether it is infected or vaccinated. Lastly, if one organization runs the test for all animals, more data will be gathered and establishes better research, so this can be also incorporated.

Individual pet owners, living in countryside or where there is high chance of interaction with wildlife, have to keep in their mind that protecting their own pets may also protect the wild animals out there. It may not apply in urban area, but place like Tsushima Island; it is a responsibility for owners to get own cat tested and minimize the interaction with the wild cats not only for the health but also for conservation purpose.

-Reference;

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