

Opisthorchis felineus in a Van Cat: Case Report

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SUMMARY

The Van Cat is a world famous cat among the world cat breeds, which is also known as odd-eyed cat, with snow-white, velvet-like soft fur. The numbers of these cats decreasing dramatically. This report was presented because *Opisthorchis felineus* was seen first time in a Van Cat, and this parasite concerns both human and animal health.

The cat was male and 4 years old belonging to a fisherman family in the city of Van. It was in agony when brought to the Animal Hospital of the Faculty of Veterinary Science, University of Yuzuncu Yıl. The cat died during clinical examination.

In autopsy, the parasite were recovered in the bile duct and some eggs of the parasite in the bile were diagnosed after microscopic examination.

In conclusion, the cat lived with a fisherman family and it most probably fed often with fish. It is well known that fish is second intermediate host for the parasite. That possibly means that fish sold in this area may have this parasite. Fish consumption in the region of Van is quite high because of the Lake Van. Thus, presence of the parasite in human in this region need to be taken into consideration.

Key words: *Opisthorchis felineus*, Van Cat.

'Bir Van Kedisinde *Opisthorchis felineus* Olgusu'

ÖZET

Van Kedisi dünya kedi ırkları arasında özel bir yere sahiptir ve bir gözü mavi, diğeri sarı, kar beyazı kadife benzeri yumuşak tüyleri ile bilinir. Bu kedilerin sayısı giderek azalmaktadır. Bu çalışma, kliniğe getirilen bir Van Kedisinde ilk defa *Opisthorchis felineus*'a rastlanması ve bu parazitin insan sağlığını yakından ilgilendirmesi nedeniyle kaleme alındı.

Çalışma materyalini Van'da balıkçı bir aileye ait 4 yaşındaki erkek bir Van Kedisi oluşturmuştur. Agoni halinde gelen kedi klinik muayenesi yapılırken öldü.

Yapılan otopside karaciğer safra yollarında parazite, mikroskopik incelenmesinde ise safrada çok sayıda yumurtaya rastlanmıştır.

Sonuç olarak bu olgu ile birlikte parazitin bölgede varolduğu ve parazitin ikinci ara konakçısını oluşturan özellikle yörede yoğun bir şekilde tüketilen Van Balığı olarak ta adlandırılan inci kefalinin (*Chalcalburnus tarichii*, Pallas 1811) bu parazit açısından detaylı bir şekilde irdelenmesi ve insidensinin belirlenmesi insan ve hayvan sağlığı açısından önemli olacaktır.

Anahtar kelimeler: *Opisthorchis felineus*, Van Kedisi.

INTRODUCTION

The Van Cat is a world-famous cat among the cat breeds which is also known as odd eyed cat, with snow-white, velvet-like soft fur. It is well known with human like behaviours being affectionate both to his/her owners and strangers The numbers of these cats are decreasing dramatically (1). Opisthorchiasis is a helminthozoonosis caused by the parasites in cat, dog, fox and human. The agent is a trematod, 1 cm in length, 2 mm width, lancet-shape, transperant and reddish which is from the family of Opisthorchiidae called *Opisthorchis felineus* (*Opisthorchis tenuicollis*). The parasite is found in liver, bile duct and rarely in the pancreas of the host (2,3,-4). The maturation of the parasite needs two intermediate hosts. It is taken from certain snail (*Bithynia leachi*) that is the first intermediate host. The eggs transform to sporocyst, redia, and then cercariae in the first intermediate host's body The cercariae transform to encysted (metacercariae) in the second intermediate host which is fish. The last hosts (cat, dog, and human) become infected by eating raw or improperly cooked infected fish (2,3). The infection cause adenomatous thickening in the epithelium of the bile duct, destruction in the liver cells of the animal. Therefore, severe clinical symptoms may develop (2,5,6,7).

The clinical picture and prognosis has been reported to depend on the number of parasite and the severity of destruction. Ichterus, chachexia, tremor, cramps and depression have been reported to develop in the severe

helminthosis cases. Furthermore, necrosis even chirrosis due to pressure caused by the parasite have been reported (3,5,6).

Although the parasite is widespread in the world especially in Polonia, Far East, and Siberia region of Russia (7,8,9), there are only a few papers about the parasite in Turkey. The existence of the parasite was established by Mimioğlu (10) in one cat out of 150 cats in 1952 in Ankara, and by Merdivenci (11) in a wild cat in 1966, in Ankara. Dinçer et al (12) also reported the existence of the parasite in 6 street cats in Elazığ. The aim of the present study was to present *Opisthorchis felineus* seen first time in a Van Cat. It was believed that the cat infected after eating fish called Van Fish (*Chalcalburnus tarichii*, Pallas 1811) (13) which is consumed much in the region of Van. Therefore, it was also aimed to point out the importance of it for public health.

MATERIAL AND METHOD

A Van Cat in agony, 4 years old, male, belonging to a fisherman family who lives in the suburb of Iskele in Van was used as material.

RESULTS

The patient died while during clinical examination. The cat was cachectic clinically. Ichterus was seen in the mucosas and necrotic foci on the liver were seen in macroscopical examination. Semi-transperant and reddish *Opisthorchis felineus* was seen in the bile duct. The parasite in the bile duct and some eggs of it in the bile after microscopic examination were seen in autopsy. Microscopic examination

of the eggs is given in the picture (Picture 1).



Picture 1: The eggs of the parasite. (X40)

DISCUSSION

Although there are several studies on *Opisthorchis felineus* worldwide (5,7,8,9), there has been only a few studies in Turkey (10,11,12). Furthermore, the presence of *Opisthorchis felineus* has not been mentioned in the parasitologic studies previously performed in the region of Van.

The eggs of *Opisthorchis felineus* are yellow-brown in color, narrower than those of *Clonorchis sinensis*, averaging 26-30x11-15 µm. The eggs of *Opisthorchis viverrini* are relatively short and broad, and eggs of *Dicrocoelium*, *Dentriticum* are dark brown in color, are thick shelled and have a large operculum. They measure 38-45 µm in length by 22-30 µm in breadth. Eggs of *Fasciola hepatica* are operculated and measure 130-150 µm in length and 63-90 µm in breadth. The eggs of *Fasciola gigantica* are larger than the eggs of *O. felineus*, *F. hepatica* and the others (3, 14). The eggs of *O. felineus*, thus, can be distinguishable easily from the eggs of the other parasites, according to these knowledge, and our picture (Picture 1) confirms these data.

This study proves the presence of the parasite in this region. Future studies should be performed on the fish species eaten in this region which are second intermediate hosts of the parasite. Because fish consumption is quite high in this region, which is also important for public health. Therefore,

the presence of it should also be investigated in terms of human.

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