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Case Report Open Access

Blue Eye Disease in Dog with Hyperthermia at Pindi Bhattian District Hafizabad, Pakistan

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Introduction

Blue eye disease is caused by the virus *Blue-eye paramyxovirus (BEPV)*, which is a negative sense single stranded RNA (ssRNA) virus. It causes nervous, reproductive and respiratory signs in its domestic host, the pig. The disease is not considered a zoonotic. Generally pigs suffer from anorexia, weight loss, and reluctance to move, dehydration, periorbital and conjunctival swelling (chemosis) and purulent/serious ocular discharge and corneal opacity. The virus also causes neurological signs including tetra paresis, opisthotonus, dysmetria, proprioceptive disorders, tremors, nystagmus mydriasis, blindness, decreased or absent menace response and respiratory signs; tachypnea, dyspnea, and open mouthed breathing. The virus only shows clinical signs in pigs but antibodies can be detected in rabbits, rats, dogs and cats [1]. But in this case a black colored local unidentified breed of male dog developed fever, anorexia and tremors with intense blue color of cornea.

Case description

An adult dog of unidentified breed was presented to Civil Veterinary Hospital, Pindi Bhattian District Hafizabad with the complaint of anorexia and lethargy. Upon clinical examination the rectal temperature was 1060F fever with intense blue coloration of cornea of both eyes as shown in Figures but no neurological or respiratory signs as usually observed in Pigs were seen in this case. There was no ocular discharge and swelling in the periorbital or conjunctival region.[2] In pig

the blue eye disease is exhibited by opacity of the eyes but the disease seen in Pindi Bhattian has been exhibited by real blue coloration of the cornea of the eyes as shown in the Figure.

Initially Ciprofloxacin (Novidate®) and Paracetamole (Calpol®) were administered but temperature could be declined only up to 1040F moreover Tobramycine eye drops and chloramphenicole along with dexamethasone eye drops were also administered in both eyes but all in vain. The animal was continuously housed in the Civil veterinary Hospital Pindi Bhattian indoor ward and was given the above said treatment continuously for one week and at last paired serum samples were sent to Poultry research Institute, Rawalpindi and Poultry Diagnostic Laboratory, Chakwal for Heamagglutination Inhibition test and Virus neutralization test. Serological testing via virus neutralization (VN) and Heamagglutination Inhibition (HI) confirmed the presence of antibodies against Blue Eye Paramyxovirus (BEPV) [3].

Figure 1: Blue coloration of the cornea is prominent in both eyes of the Dog.

Discussion

This case illustrates that clinical symptom of Blue eye Paramyxovirus may also appear in Dogs as in Pigs but without respiratory or neurological signs. This is a viral disease of pigs that causes nervous symptoms, reproductive failure and opacity or bluing of the cornea. It was seen first in Mexico in 1980 but has also been reported in other countries. It is not seen in Europe. Symptoms in all Pigs include In appetence, Corneal opacity, conjunctivitis, Nervous signs, fits and convulsions, Dog sitting position, Fever, Increased returns Increased weaning to mating intervals, Stillbirths Mummified piglets, High mortality in piglets, Swollen testicles and Loss of libido. There is no effective treatment for this disease. Whole the work has been conducted up till now on pigs but nothing has been done regarding this disease in dogs as this disease has not been seen in dogs previously with too much bluish ting in the cornea of eyes. The case which we have seen was treated with many antibiotics and eye drops but no benefit was found and dog was sent to another place to complete rest of its life [4]. In many dogs Blue eye condition is also seen as cloudy corneas as a result of an adenovirus type 1 infection. Adenovirus type 1 is a severe viral disease affecting dogs of all ages. But in Adenovirus infection usually the liver is affected, hence the name hepatitis, but occasionally the eye is also involved, hence the term 'Hepatitis Blue Eye. But in our case Blue Eye Paramyxo virus (BEPV) was isolated. So we are confident to say that this was not Hepatitis Blue Eye disease because serum taken from the effected dog was negative for any Adenovirus antibodies [5]. Another condition regarding the cloudy appearance of eye in dogs is keratitis (Cloudy Eye) in which inflammation of the eyes is experienced and as the inflammation gets mature cornea becomes milky white and opaque. The most common bacteria which may result into infectious keratitis are Staphylococcus, Streptococcus and Pseudomonas. In this cloudy eye condition the feeling of pain and selling is seen and local application of antibiotics is seen very effective. Therefore it is confidently declared that BEPV with bluish eye coloration has been first seen in Pindi Bhattian, District Hafizabad, Pakistan. Further research on this topic is recommended.

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