

Immunostimulatory effect of vitamin e on infected common carp, *Cyprinus carpio* (L.) against *Aeromonas hydrophila*

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ABSTRACT:

The effect of various concentration of dietary Vitamin E on the survival and mortality rate, phagocytic activity, leucocyte count, protein and relative level protection of *Cyprinus carpio* against *Aeromonas hydrophila*. *Aeromonas hydrophila* treated group showed 60 % mortality and 40 % survival rate on 20th days than negative and Vitamin E treated. Experimental groups and treated with different quantity of Vitamin E (200 mg, 400 mg and 600 mg) and intraperitoneally (IP) injected with 0.1 ml of 10⁵ CFU/ml of *A. hydrophila* showed no mortality. The control group showed more phagocytic activity and the Vitamin E administered groups showed more phagocytic activity on 25th day. Vitamin E experimental groups of different quantity showed more number of leucocytes from 15th day onwards. Vitamin E administered groups showed amount of muscle protein decreased from 5th, 10th and 15th day respectively. The control group showed 12.5 % protection and the Vitamin E treated 200 mg showed 77.77 %, 400 mg showed 57.40 % and 600 mg showed 42.85 % protection. The results clearly indicated that 200 mg Vitamin E treated group showed more protection than other concentrations. The dietary formulation with Vitamin E has effectively enhanced survival rate, phagocytic activity, protein and relative level protection against *A. hydrophila*.

Keywords:

Cyprinus carpio, Common carp, Bacterial disease, *Aeromonas hydrophila*,
Vitamin E, Immunostimulant.