ABSTRACT

ANWAR HASAN. Co-infection of Infectious Myonecrosis Virus (IMNV) and Vibrio harveyi in Pacific White Shrimp (Litopenaeus vannamei). Under direction of SUKENDA and WIDANARNI.

L. vannamei production in Indonesia was growing intensively. In 2006, IMN (infectious myonecrosis) disease was confirmed spread to Indonesia shrimp farm and declined shrimp production. The study was conducted to investigate effect of dose of V. harveyi on co-infection with IMNV in L. vannamei as well as development of viral infection. Shrimps juvenile were oral infected with IMNV infected shrimps 10 % feeding rate during 3 days and co-infected with 10^6, 10^7 and 10^8 cfu/ml V. harveyi. Mortality rate was 0 % in control and single infection of V. harveyi except 10^8 cfu/ml treatment. Mortality pattern demonstrated on co-infection was faster and higher than single IMNV infection in 14 days observation. The density of green colony Vibrio in hepatopancreas of co-infected shrimps collected in 2, 4, 6, 8 and 10 days post infection were higher than V. harveyi single infected (significantly in 10 days post infection). There were no difference of IMN disease development between co-infection and IMNV single infection. It was confirmed by visual gross sign appeared, tissue and lymphoid organ histophatology, organ abnormality, and PCR test. In conclusion, IMN disease caused higher and faster mortality on co-infection with V. harveyi, but not affect to IMN disease development.

Keywords: co-infection, L. vannamei, V. harveyi, IMNV, mortality, gross sign