

RINGKASAN

AULIA AZIZAH MS. Profil Histopatologi Ginjal dan Hati Ikan Wader Pari (*Rasbora argyrotaenia*) yang Diinfeksi *Aeromonas hydrophila*. Dosen Pembimbing Ir. Wahyu Tjahjaningsih, M.Si dan Mohammad Faizal Ulkhaq, S.Pi., M.Si.

Aeromonas hydrophila merupakan bakteri oportunistik yang tersebar luas di lingkungan perairan tawar dan menyebabkan penyakit *Motile Aeromonas Septicemia* (MAS). Kerusakan jaringan yang terjadi akibat penyakit MAS disebabkan aktivitas produk ekstraseluler yang diproduksi oleh *A. hydrophila* yaitu berupa toksin hemolisin dan aerolisin, serta beberapa enzim yaitu protease dan lesitinase. Penelitian ini bertujuan untuk mengetahui perubahan histopatologi ginjal dan hati ikan wader (*R. argyrotaenia*) yang diinfeksi bakteri *A. hydrophila*.

Penelitian ini dilaksanakan pada bulan Oktober-November 2019, menggunakan Rancangan Acak Lengkap (RAL) yang terdiri dari 5 perlakuan dan 4 ulangan. Ikan wader pari diinfeksi bakteri *A. hydrophila* secara intramuskular dengan kepadatan sesuai perlakuan, diamati perubahan gejala klinisnya dan diambil organ ginjal dan hati. Parameter utama yaitu perubahan histopatologi ginjal dan hati ikan wader pari, sedangkan parameter pendukung yaitu gejala klinis, tingkat kelulushidupan, dan kualitas air. Seluruh parameter penelitian dianalisis secara deskriptif dengan bantuan gambar, tabel dan grafik.

Terjadi perubahan histopatologi pada ginjal dan hati ikan wader pari setelah diinfeksi *A. hydrophila* yaitu adanya degenerasi dan nekrosis. Histopatologi ginjal menunjukkan persentase sel normal pada perlakuan P0 (kontrol negatif) paling tinggi dari semua perlakuan dan cenderung menurun hingga P4 (infeksi *A. hydrophila* 10^{10} CFU/ml). Histopatologi hati ikan wader pari pada perlakuan P0 (kontrol negatif) menunjukkan bahwa persentase sel normal paling tinggi dari perlakuan lainnya, namun berkebalikan dengan nilai persentase sel degenerasi dan nekrosis. Semakin tinggi jumlah bakteri yang diinfeksi pada ikan wader pari maka semakin parah kerusakan yang terjadi.

SUMMARY

AULIA AZIZAH MS. Histopathological Profile of Silver Rasbora's Kidney and Liver That Was Infected by *Aeromonas hydrophila*. Academic Advisor Ir. Wahyu Tjahjaningsih, M.Si. and Mohammad Faizal Ulkhaq, S.Pi., M.Si.

Aeromonas hydrophila is an opportunistic bacteria that widespread in freshwater environments and causes Motile Aeromonas Septicemia (MAS) disease. Tissue damage occurs due to the activity of extracellular products produced by *A. hydrophila* in the form of toxins hemolisin and aerolisin, as well as several enzymes namely protease and lecithinase. This study aims to determine the histopathological changes of kidney and liver of silver rasbora that infected with *A. hydrophila*.

This research was conducted in October-November 2019 using a Completely Randomized Design (CRD) consisting of 5 treatments 4 replicate. Silver rasbora that infected with *A. hydrophila* referred by treatments, clinical sign was observed and kidney and liver was collected. The main parameters were histopatological of kidney and liver of silver rasbora that infected with *A. hydrophila*. The supporting parameters were clinical sign, survival rate, and water quality during rearing. All parameters were analyzed by descriptive methods with picture, table, and chart.

Histopathological changes that occurred in kidney and liver of silver rasbora after infected with *A. hydrophila* such as degeneration and necrosis. Histopathology of silver rasbora kidney shows the highest percentage of normal cells in the control treatment than all treatments and decrease until P4 (*A. hydrophila* infected 10^{10} CFU / ml). Histopathology of silver rasbora liver in P0 (negative control) showed the highest percentage of normal cells than other treatments, but its opposite with the percentage of degeneration and necrosis cells. This study shows the occurrence of histopathological changes in kidney and liver that similar with the number of bacteria that were infected to silver rasbora.