

INTISARI

PENGARUH AQUAPRIM[®] DAN IMUSTRUM[®] TERHADAP GAMBARAN HISTOLOGI OTAK, GINJAL, DAN JANTUNG MENCIT (*Mus musculus*) YANG DIINFEKSI *Toxoplasma gondii*

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Toksoplasmosis merupakan penyakit zoonosis yang disebabkan *Toxoplasma gondii* dan menyerang hampir semua vertebrata berdarah panas termasuk manusia, unggas, dan kucing yang merupakan hospes definitif *T. gondii*. Penelitian ini bertujuan untuk mengetahui pengaruh Imustrum[®] dan Aquaprim[®] terhadap histopatologi otak, jantung, dan ginjal mencit yang diinfeksi *T. gondii* galur RH sebanyak 1×10^3 takizoit. Penelitian menggunakan 20 ekor mencit galur Swiss jantan berumur 2 bulan dan berat badan 25-30 gram dibagi menjadi 4 kelompok, yaitu kelompok I (kontrol negatif), kelompok II (kontrol positif diinfeksi takizoit *T. gondii*), kelompok III (diinfeksi takizoit *T. gondii* dan diberi Imustrum[®]), kelompok IV (diinfeksi takizoit *T. gondii* dan diberi Aquaprim[®]). Pemberian Imustrum[®] dilakukan setiap pagi dan sore dengan meneteskan 3 tetes Imustrum[®]/10 ml air minum. Pemberian Aquaprim[®] (tiap ml mengandung 200 mg Sulfadiazine dan 40 mg Trimethoprim) sebanyak 0,01 ml/ekor pada hari ke-2 setelah infeksi. Pengambilan organ otak, jantung, dan ginjal dilakukan saat nekropsi setelah mencit mati dan 20 hari pasca infeksi, untuk selanjutnya dibuat preparat histopatologi. Hasil penelitian menunjukkan bahwa mencit kelompok II mati pada hari ke 6 setelah infeksi, kelompok III pada hari ke 6 setelah infeksi mati 2 ekor (33,33%) dan pada hari ke 7 mati 4 ekor (66,67%), sedangkan kelompok IV pada hari ke 20 masih hidup. Hasil pemeriksaan histopatologi organ otak dan ginjal dapat disimpulkan bahwa mencit yang diinfeksi takizoit *T. gondii* 10^3 dapat terjadi vakuolisasi, nekrosis, kongesti, dan infiltrasi mesangial sel. Pengobatan dengan Aquaprim[®] mampu membuat daya hidup kelompok yang diinfeksi *T. gondii* menjadi lebih lama dibandingkan dengan pemberian Imustrum[®].

Kata Kunci : Toksoplasmosis, *Toxoplasma gondii*, Aquaprim[®], Imustrum[®], Otak, Jantung, Ginjal

ABSTRACT

THE EFFECT OF AQUAPRIM[®] AND IMUSTRUM[®] ON BRAIN, KIDNEY, AND HEART OF MICE (*Mus musculus*) INFECTED WITH *Toxoplasma gondii*

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Toxoplasmosis is a zoonotic disease caused by *Toxoplasma gondii* and affects almost all warm-blooded vertebrates, including humans, birds, and cats are the definitive host of *T. gondii*. This study aims to determine the effect of the Aquaprim[®] and Imustrum[®] to the histopathology of brain, heart, and kidneys of mice which were infected by *T. gondii* RH strain as much as 1×10^3 tachyzoite. This study used twenty 2 months old female Swiss strain mice and with body weight around 25-30 g. They were divided into 4 groups: group I (negative control), group II (positive control which were infected with *T. gondii* tachyzoite), group III (infected with *T. gondii* tachyzoite and were given Imustrum[®]), group IV (infected *T. gondii* tachyzoite and given Aquaprim[®]) The administration of Imustrum[®] was performed every morning and evening with 3 drops of imustrum/10 ml drinking water. Aquaprim[®] administration (every ml consist of 200 mg of sulfadiazine and 40 mg of trimethoprim) was given as as much as 0.01 ml/mice on day 2 after the mice died. The removal of brain, heart, and kidney was perform during the necropy process after the mice died or 20 days after infection. These organs were prepared to become histological slide. Experiment results showed two mice (33,33%) died on day sixth, and on day seventh four mice (66,67%) died, 2 (33.33%) mices in grup III died six days after infection, and on day seventh 4 (66.67%) died, while mices in grup IV until 20 days after infection were still alive. The Histopathological examination of kidney and brain could be concluded that mices which were infected with *T. gondii* tachyzoite had vacuolization, necrosis, congestion, and infiltration of mesangel cell. Treatment with Aquaprim[®] could make the shelf-life longer of the group which were infected with *T. gondii* compared to treatment of Imustrum[®].

Keywords : Toxoplasmosis, *Toxoplasma gondii*, Aquaprim[®], Imustrum[®], Brain, Heart, Kidney