

ABSTRAK

Aspirin merupakan obat antiinflamasi nonsteroid (OAINS) yang dalam dosis rendah digunakan sebagai antiplatelet pada pasien penyakit kardiovaskular. Aspirin dapat memengaruhi ginjal melalui penghambatan sintesis prostaglandin yang berperan dalam regulasi perfusi ginjal. Penelitian ini bertujuan untuk menganalisis pengaruh pemberian aspirin terhadap gambaran histopatologi ginjal tikus putih (*Rattus norvegicus*) jantan galur Wistar. Penelitian ini merupakan penelitian eksperimental dengan desain *post-test only control group*. Sebanyak 30 ekor tikus putih jantan galur Wistar dibagi menjadi tiga kelompok, yaitu kelompok kontrol yang diberikan CMC 0,5%, kelompok perlakuan aspirin dosis 80 mg/hari, dan kelompok perlakuan aspirin dosis 100 mg/hari secara oral selama 21 hari. Pemeriksaan histopatologi ginjal dilakukan menggunakan pewarnaan Hematoksilin–Eosin dan dinilai dengan sistem skoring EGTI (endotel, glomerulus, tubulus, dan interstisium). Hasil uji *Kruskal-Wallis* menunjukkan bahwa pemberian aspirin dosis 80 mg/hari dan 100 mg/hari tidak menimbulkan perbedaan bermakna secara statistik terhadap gambaran histopatologi ginjal, baik dibandingkan kelompok kontrol maupun antara kedua dosis tersebut ($p > 0,05$). Pada dosis 80 mg/hari ditemukan perubahan histopatologis ringan pada kompartemen endotel dan tubulus, sedangkan pada dosis 100 mg/hari perubahan ringan lebih sering ditemukan pada kompartemen tubulus. Kesimpulan penelitian ini menunjukkan bahwa pemberian aspirin dosis 80 mg/hari dan 100 mg/hari selama 21 hari menimbulkan efek ringan terhadap gambaran histopatologi ginjal tikus putih jantan galur Wistar, tanpa perbedaan yang bermakna secara statistik.

Kata kunci: aspirin, OAINS, antiplatelet, histopatologi ginjal, tikus Wistar

ABSTRACT

Aspirin is a nonsteroidal anti-inflammatory drug (NSAID) that, at low doses, is used as an antiplatelet agent in patients with cardiovascular disease. Aspirin can affect the kidneys through inhibition of prostaglandin synthesis, which plays a role in regulating renal perfusion. This study aimed to analyze the effects of aspirin administration on the renal histopathological features of male Wistar strain white rats (*Rattus norvegicus*). This experimental study used a post-test only control group design. A total of 30 male Wistar rats were divided into three groups: a control group receiving 0.5% CMC, a treatment group receiving aspirin at a dose of 80 mg/day, and a treatment group receiving aspirin at a dose of 100 mg/day, administered orally for 21 days. Renal histopathological examination was performed using Hematoxylin–Eosin staining and assessed using the EGTI (endothelium, glomerulus, tubules, and interstitium) scoring system. The Kruskal–Wallis test results showed that administration of aspirin at doses of 80 mg/day and 100 mg/day did not produce statistically significant differences in renal histopathological features, either compared with the control group or between the two dosage groups ($p > 0.05$). At a dose of 80 mg/day, mild histopathological changes were observed in the endothelial and tubular compartments, whereas at a dose of 100 mg/day, mild changes were more frequently observed in the tubular compartment. In conclusion, administration of aspirin at doses of 80 mg/day and 100 mg/day for 21 days produced mild effects on the renal histopathological features of male Wistar rats, without statistically significant differences.

Keywords: aspirin, NSAIDs, antiplatelet, renal histopathology, Wistar rats