Pengujian bioaktivitas anti agregasi platelet antiplatelet ekstrak air daun tanjung mimusops elengi l pada mencit galur deutsche democratic Yokohama = Anti platelet aggregation antiplatelet bioactivity test of Tanjung Mimusops elengi l leaves water extract on deutsche democratic Yokohama strain mice

Jason Gabriel Jonathan, author

Abstrak

[Konsumsi obat-obatan anti agregasi platelet (antiplatelet) seperti clopidogrel yang digunakan untuk menurunkan agregasi platelet dapat mencegah terjadinya trombosis. Namun, konsumsi obat-obatan antiplatelet sintetik seringkali memberikan efek samping bagi tubuh. Daun Tanjung (Mimusops elengi L.) dapat dimanfaatkan sebagai sumber antiplatelet alami dan murah karena mengandung senyawa katekin. Ekstraksi senyawa katekin dari daun Tanjung menggunakan metode refluks dengan pelarut air pada lima variasi waktu (15 menit, 30 menit, 45 menit, 60 menit, 75 menit) menunjukkan bahwa waktu ekstraksi 75 menit menghasilkan kandungan katekin tertinggi, yakni sebesar 452,39 ppm. Hasil analisis ekstrak menggunakan FTIR didapatkan gugus-gugus senyawa yang umumnya terkandung dalam senyawa katekin yaitu fenol, aromatik, serta eter. Efek agregasi antiplatelet dari ekstrak daun Tanjung kemudian diukur menggunakan waktu pendarahan pada mencit galur Deutsche Democratic Yokohama. Ekstrak diberikan secara oral selama 8 hari, dengan pengukuran waktu pendarahan dilakukan pada hari pertama dan hari kesembilan. Kelompok pengujian bioaktivitas antiplatelet adalah kelompok kontrol negatif, kelompok kontrol positif (clopidogrel 0,033 mg/30 gram berat mencit), serta tiga kelompok dosis; TE1 (0,0198 mg/30 gram berat mencit), TE2 (0,0396 mg/30 gram berat mencit), dan TE3 (0,0793 mg/30 gram berat mencit). Pengujian dilakukan dengan cara melukai ekor mencit untuk melihat waktu pendarahan yang dialami mencit sebelum dan sesudah pemberian ekstrak. Setelah mendapatkan peningkatan waktu pendarahan, data dianalisis menggunakan analisis uji varian (Anova) yang dilanjutkan dengan pengujian LSD menggunakan aplikasi SPPS V.16. Hasil dari peningkatan waktu pendarahan menunjukkan bahwa kelompok dosis TE3 dengan dosis 0,0793 mg/30 gram berat mencit memberikan waktu pendarahan sebesar 132.77 + 32.52% yang sebanding dengan kelompok kontrol positif sebesar 110.45 + 13.66%.
<hr>Consumption of anti platelet aggregation (antiplatelet) drugs such as clopidogrel which is used to lower platelet aggregation can be used to prevent thrombosis. However, the consumption of synthetic antiplatelet drugs frequently give side effects to the body. Tanjung (Mimusops elengi L.) leaves can be used as a natural and inexpensive source of antiplatelet compounds that contain catechins. Extraction of catechin compounds from Tanjung?s leaves using reflux system and water as its solvent with five variations of the time (15 minutes, 30 minutes, 45 minutes, 60 minutes, 75 minutes) showed that the extraction time of 75 minutes produces the highest catechin content, which amounted to 452.39 ppm. FTIR analysis results obtained extracts using groups of compounds that are generally contained in catechin compounds of phenols, aromatic, and ether. Antiplatelet aggregation effect of Tanjung leaves extract then measured using bleeding time on DDY strain mice. Extracts is administered orally for 8 days, with bleeding time measurements made on the first day and the ninth day. The antiplatelet activity groups test was negative control group, positive control group (0.033 mg clopidogrel/30 gram weight of mice), and three dose groups; TE1 (0.0198 mg/30 g

mouse weight), TE2 (0.0396 mg/30 gram weight of mice), and TE3 (0.0793 mg/30 g mouse weight). Tests conducted by wounding mice to see that the bleeding time of mice before and after administration of the extract. After getting an increase in bleeding time, data were analyzed with SPP V.16 application for analysis of variance test (ANOVA) followed by LSD test. The result of the increase in bleeding time suggests that TE3 dose group with a dose of 0.0793 mg/30 gram weight of the mice gave bleeding time of 132.77 + 32.52% which is comparable to the positive control group amounted to 110.45 + 13.66%., Consumption of anti platelet aggregation (antiplatelet) drugs such as clopidogrel which is used to lower platelet aggregation can be used to prevent thrombosis. However, the consumption of synthetic antiplatelet drugs frequently give side effects to the body. Tanjung (Mimusops elengi L.) leaves can be used as a natural and inexpensive source of antiplatelet compounds that contain catechins. Extraction of catechin compounds from Tanjung's leaves using reflux system and water as its solvent with five variations of the time (15 minutes, 30 minutes, 45 minutes, 60 minutes, 75 minutes) showed that the extraction time of 75 minutes produces the highest catechin content, which amounted to 452.39 ppm. FTIR analysis results obtained extracts using groups of compounds that are generally contained in catechin compounds of phenols, aromatic, and ether. Antiplatelet aggregation effect of Tanjung leaves extract then measured using bleeding time on DDY strain mice. Extracts is administered orally for 8 days, with bleeding time measurements made on the first day and the ninth day. The antiplatelet activity groups test was negative control group, positive control group (0.033 mg clopidogrel/30 gram weight of mice), and three dose groups; TE1 (0.0198 mg/30 g mouse weight), TE2 (0.0396 mg/30 gram weight of mice), and TE3 (0.0793 mg/30 g mouse weight). Tests conducted by wounding mice to see that the bleeding time of mice before and after administration of the extract. After getting an increase in bleeding time, data were analyzed with SPP V.16 application for analysis of variance test (ANOVA) followed by LSD test. The result of the increase in bleeding time suggests that TE3 dose group with a dose of 0.0793 mg/30 gram weight of the mice gave bleeding time of 132.77 + 32.52% which is comparable to the positive control group amounted to 110.45 + 13.66%.]