

INTISARI

Antaraksi dapat terjadi ketika efek suatu obat berubah oleh adanya obat lain, makanan, minuman, atau zat kimia. Penelitian ini bertujuan untuk mengetahui pengaruh lama masa pemberian praperlakuan brokoli terhadap daya analgesik asam mefenamat pada mencit. Penelitian ini merupakan jenis penelitian eksperimental murni pola acak lengkap searah dengan menggunakan metode rangsang kimia (*writhing test*).

Pemberian praperlakuan brokoli dilakukan sekali sehari selama 1, 2, 3, dan 4 hari berturut-turut. Asam mefenamat diberikan secara oral (91 mg/kg BB). Daya analgesik ditentukan dengan metode rangsang kimia (ditunjukkan sebagai respon geliat) dan sebagai hasil perhitungan adalah nilai % daya analgesik yang dianalisis secara statistik dengan ANOVA satu jalan dilanjutkan dengan uji Scheffe taraf kepercayaan 95 %.

Hasil penelitian yaitu nilai % daya analgesik kontrol negatif (aquadest) 0 %, kontrol positif (asam mefenamat dosis 91 mg/kg BB) $47,13 \pm 4,77$ %, dan kelompok kontrol praperlakuan brokoli selama 1, 2, 3, dan 4 hari yaitu $36,66 \pm 2,98$ %; $20,78 \pm 2,84$ %; $16,39 \pm 2,35$ %; dan $-18,92 \pm 1,83$ %. Sedangkan kelompok perlakuan yaitu kelompok antaraksi asam mefenamat dosis 91 mg/kg BB dan brokoli yang diberikan selama 1, 2, 3, dan 4 hari yaitu $60,14 \pm 2,35$ %; $50,00 \pm 2,77$ %; $34,63 \pm 1,16$ %; dan $5,41 \pm 1,30$ %. Setelah diuji secara statistik terhadap kontrol negatif (aquadest) kelompok perlakuan 1 dan 2 hari berbeda bermakna (masih memiliki daya analgesik), sedangkan 3 dan 4 hari tidak berbeda bermakna (daya analgesiknya hilang). Antaraksi praperlakuan brokoli 1 dan 2 hari dengan asam mefenamat menyebabkan peningkatan daya analgesik, sedangkan praperlakuan brokoli 3 dan 4 hari menyebabkan penurunan daya analgesik. Nilai perubahan % daya analgesik akibat antaraksi praperlakuan brokoli 1, 2, 3, dan 4 hari dan asam mefenamat yaitu: $27,60 \pm 5,00$ %; $6,10 \pm 5,87$ %; $-26,52 \pm 2,47$ %; dan $-88,53 \pm 2,76$ %. Walaupun nilai perubahan % daya analgesik praperlakuan brokoli 3 hari mengalami penurunan, tetapi secara statistik tidak berbeda bermakna terhadap kontrol positif.

Oleh karena itu, dapat disimpulkan bahwa daya analgesik asam mefenamat dapat dipengaruhi oleh lama masa pemberian praperlakuan brokoli dosis 75 g/kg BB. Praperlakuan brokoli dosis 75 g/kg BB 1 kali sehari selama 3 hari belum dapat mempengaruhi daya analgesik asam mefenamat, sedangkan praperlakuan brokoli dosis 75 g/kg BB 1 kali sehari selama 4 hari menyebabkan penurunan daya analgesik asam mefenamat.

ABSTRACT

An interaction is occurred when the effects of one drug are changed by the presence of other drugs, food, beverage or chemical essence. The research aimed to find out the influence of broccoli as a pretreatment toward the analgesic potency of mefenamic acid in white female mice had been done. Writhing test method with oneway completely random experimental design was applied to this research.

As a pretreatment, broccoli feeding to the white female mice was done once a day during 1, 2, 3, dan 4 days respectively. For the treatment, mefenamic acid was given orally (91 mg/kg BW) to those groups of pre-treatment. The analgetic potency was determined by writhing method (showed as writhing responses) and the percentage value of analgetic potency as results were evaluated statistically by using oneway ANOVA, followed by Scheffe test with 95 % confident value.

The results showed the value of 0 % for the negatif control (aquadest), $47,13 \pm 4,77$ % for the positive control (mefenamic acid; 91 mg/kg BW), and $36,66 \pm 2,98$ %; $20,78 \pm 2,84$ %; $16,39 \pm 2,35$ %; $-18,92 \pm 1,83$ % for the broccoli pretreatment negative control during 1, 2, 3, 4 days respectively. The treatment groups which were the groups of concomitant administering broccoli as pretreatment during 1, 2, 3, 4 days respectively and mefenamic acid as drug showed the value of $60,14 \pm 2,35$ %; $50,00 \pm 2,77$ %; $34,63 \pm 1,16$ %; $5,41 \pm 1,30$ %. After tested statistically, it showed that compared to negative control; the 1 and 2 days treatment groups had significant differences (still having analgetic potency), while the 3 and 4 days treatment groups had no differences significantly (the analgetic potency was eliminated). The interaction between 1 and 2 days broccoli pretreatment and mefenamic acid caused the increasing of analgetic potency, while the interaction between 3 and 4 days broccoli pretreatment and mefenamic acid caused the decreasing ones. The value of the changed of analgetic potency resulted by interaction between 1, 2, 3, and 4 days broccoli pretreatment and mefenamic acid were $27,60 \pm 5,00$ %; $6,10 \pm 5,87$ %; $-26,52 \pm 2,47$ %; and $-88,53 \pm 2,76$ %. Eventhough the value of the analgetic potency's change of the 3 day broccoli pretreatment was decreasing, it had no difference significantly, compared to positive control.

Therefore, it could be concluded that the analgetic potency of mefenamic acid could affected by a dose of 75 gm/kg BW broccoli pretreatment if it was administered. Once a day with a dose of 75 gm/kg BW broccoli pretreatment during 3 days could not influence the analgetic potency of mefenamic acid, while once a day with a dose of 75 gm/kg BW broccoli pretreatment could be the opposite ones.