

ABSTRAK

Masyarakat Indonesia mengkonsumsi *monosodium glutamate* (MSG) sebanyak 0,6g/ hari. Konsumsi MSG menyebabkan peningkatan tekanan darah. Tujuan penelitian ini mengetahui perubahan tekanan darah berdasarkan lama dan dosis pemberian MSG.

Penelitian eksperimental dengan rancangan *prepost test only control group*. Subjek penelitian adalah mencit(n=32) yang dibagi menjadi 4 kelompok yakni: kelompok 1: kontrol tanpa perlakuan, kelompok 2: MSG 15mg, kelompok 3: MSG 30mg, dan kelompok 4: MSG 45mg kemudian diukur tekanan darahnya seminggu sekali selama empat minggu. Perubahan tekanan darah dianalisis dengan uji *One-Way Anova* dan dilanjutkan dengan uji *Post Hoc*.

Tekanan darah awal sebelum pemberian MSG dan 1 minggu setelah pemberian MSG tidak menunjukkan perbedaan yang bermakna diantara keempat kelompok uji ($p>0.05$). Perbedaan tekanan darah tampak mulai pada minggu ke-2 sampai dengan ke-4 setelah pemberian MSG. Ketiga variasi dosis MSG dalam penelitian ini menunjukkan efek dalam meningkatkan tekanan darah ($p<0.05$).

Kesimpulan: pemberian MSG berpengaruh terhadap tekanan darah mencit kelompok yang diukur dengan pengukur tekanan darah CODA.

Kata kunci : *monosodium glutamate*, tekanan darah

ABSTRACT

The daily dietary of MSG intake among Indonesian has been shown to be high (0.06 g). MSG consumption causes an increase in blood pressure. The purpose of this study was to determine effect of MSG on blood pressure. In this experimental research with prepost test only control group design, 32 mice were divided into 4 groups. Group 1 served as control. Groups 2, 3, 4 were treated with 15mg, 30mg, 45 mg MSG respectively. The blood pressure was measured in week 1, 2, 3, 4. Group 1 was measured with tail-cuff method (CODA™ system). Changes in blood pressure were analyzed by One-Way ANOVA followed by Post Hoc test. The results showed no significant difference in blood pressure between week 0 and 1. Blood pressure before administration of MSG and MSG 1 week after administration showed no significant difference among the four test groups ($p > 0.05$). MSG-treated rats had significantly higher levels of blood pressure compared to that of control. There was no statistically significant difference in blood pressure among the treated groups ($p < 0.05$). In conclusion, the administration of MSG has an effect on blood pressure in mice.

Keywords: *monosodium glutamate*, blood pressure