

PENGARUH PEMBERIAN MONOSODIUM GLUTAMAT TERHADAP STRUKTUR MIKROSKOPIS OVARIUM MENCIT (*Mus musculus*, L.)

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ABSTRACT

This study aims to determine the effect of MSG to the microscopic structure of the ovaries of mice. This study was a experimental study using a completely randomized design (CRD). A total of 16 female mice aged 3 month were divided into 4 groups namely P0 (Control), P1 (0,012 mg/gr BB), P2 (0,015 mg/gr BB) and P3 (0,018 mg/gr BB), MSG administration carried out of 14 days. On day 15 the animals were sacrificed and performed organ harvesting ovaries to make histological preparations. Observation were made by observing the histological structure of the ovaries, and count the number of primary follicles, secondary, tertiary, the corpus luteum and follicular atretic. Data were tested with ANOVA, and LSD ($\alpha=0,05\%$). The result showed the existence of structural damage in the form of a gap between the ovarian follicular granulosa cells and ovarium follicle diameter reduced with increasing doses of MSG given. MSG administration also decreases the average number of follicles in all treatment doses, but the mean of the highest drop in the number of follicles present in treatment P3 that is, the number of primary follicles (2,50), secondary follicles (2,25), tertiary follicles (1,25) and follicular atretic (4,25), while the corpus luteum is not found.

Keywords : *Monosodium glutamate, Damaged Structure of The Ovaries, Mice (Mus musculus,L)*

ABSTRAK

Penelitian ini bertujuan mengetahui pengaruh pemberian MSG terhadap struktur mikroskopis ovarium mencit. Penelitian ini merupakan penelitian eksperimental menggunakan rancangan acak lengkap (RAL). Sebanyak 16 ekor mencit betina berusia 3 bulan dibagi kedalam 4 kelompok perlakuan yaitu P0(Kontrol), P1(0,012 mg/gr BB), P2(0,015 mg/gr BB), dan P3(0,018 mg/gr BB), pemberian MSG dilakukan selama 14 hari. Pada hari ke-15 hewan dikorbankan dan dilakukan pengambilan organ ovarium untuk dibuat preparat histologisnya. Pengamatan dilakukan dengan mengamati kerusakan struktur ovarium dan menghitung jumlah folikel primer, sekunder, tersier, korpus luteum dan folikel atresia. Data diuji dengan ANAVA, dan uji BNT ($\alpha=0,05\%$). Hasil penelitian menunjukkan adanya kerusakan struktur ovarium berupa celah diantara sel granulosa folikel dan berkurangnya diameter folikel ovarium seiring dengan meningkatnya dosis MSG yang diberikan. Pemberian MSG juga menurunkan rerata jumlah folikel pada semua dosis perlakuan, namun rerata penurunan jumlah folikel tertinggi terdapat pada perlakuan P3 yaitu, jumlah folikel primer (2,50), folikel sekunder (2,25), folikel tersier (1,25) dan folikel atresia (4,25), sedangkan korpus luteum tidak ditemukan.

Kata Kunci : *Monosodium Glutamat, Kerusakan Struktur Ovarium, Mencit (Mus musculus, L.)*