

Arif Abu Hasan, 2019, **Distribusi dan Retensi Merkuri pada Berbagai Organ Induk dan Fetus Mencit (*Mus musculus*) Akibat Induksi Merkuri Klorida (HgCl_2) Umur Kebuntingan ke 8, 9, 10, 11 Hari**, Skripsi ini dibawah bimbingan Prof. Win Darmanto, Ph.D. dan Drs. H. Saikhu Akhmad H., M. Kes. Departemen Biologi, Fakultas Sains dan Teknologi, Universitas Airlangga, Surabaya.

ABSTRAK

Penelitian ini bertujuan mengetahui distribusi dan retensi merkuri akut, sub kronis, dan kronis pada berbagai organ mencit (*Mus musculus*) bunting maupun tidak bunting. Penelitian ini menggunakan mencit bunting dan tidak bunting sebanyak 27 ekor dikelompokkan menjadi tujuh kelompok perlakuan dan dua kelompok kontrol, masing-masing terdiri dari tiga pengulangan. Pada kelompok mencit tidak bunting yaitu kelompok kontrol (K2) yang tidak diinduksi merkuri klorida, kelompok perlakuan P1, P2, dan P3 merupakan pengukuran kadar merkuri pada interval waktu masing-masing 24, 48, dan 72 jam. Pada kelompok mencit bunting diukur kadar merkuri pada umur kebuntingan 18 hari terdiri atas kelompok kontrol bunting (K1) yang tidak diinduksi merkuri klorida, kelompok perlakuan PA, PB, PC, dan PD diinduksi merkuri klorida pada umur kebuntingan masing-masing 8, 9, 10, dan 11 hari. Sampel yang didapat kemudian dilakukan pengujian dengan metode AAS (*Atomic Absorption Spectrophotometry*) kemudian diuji *One Way Anova*, analisis regresi serta uji korelasi *Pearson*. Hasil penelitian menunjukkan, distribusi kadar merkuri tertinggi pada mencit tidak bunting terdapat pada organ rambut, sedangkan kadar merkuri terendah terdapat pada organ hepar. Retensi akut dan sub kronis kadar merkuri pada mencit tidak bunting mengalami kecenderungan kenaikan pada organ uterus, hepar, rambut, dan otak; sedangkan pada organ ginjal dan darah cenderung mengalami penurunan kadar merkuri. Pada mencit bunting, distribusi kadar merkuri tertinggi terdapat pada organ rambut, sedangkan kadar merkuri terendah terdapat pada organ otak fetus. Retensi sub kronis kadar merkuri mencit bunting mengalami kecenderungan kenaikan pada organ plasenta dan hepar sedangkan pada organ uterus, ginjal, rambut, otak induk, viseral fetus, dan otak fetus cenderung mengalami penurunan kadar merkuri.

Kata Kunci: *distribusi, retensi, merkuri klorida, Mus musculus, organ, fetus.*

Arif Abu Hasan, 2019, **Distribution and Retention of Mercury in Various Mother and Fetal Organs (*Mus musculus*) Due to the Induction of Mercury Chloride (HgCl₂), the Age of Pregnancy to 8, 9, 10, and 11 Days**, Undergraduate research paper, supervised by Prof. Win Darmanto, Ph.D. and Drs. H. Saikhu Akhmad H., M. Kes. Departement of Biology, Faculty of Science and Technology, Airlangga University, Surabaya.

ABSTRACT

This study was occurs to determine the distribution and retention of acute, sub-chronic, and chronic mercury in various organs of pregnant and non-pregnant mice (*Mus musculus*). This study used 27 pregnant and non-pregnant mice, grouped into seven treatment groups and two control groups, each consisting of three repetitions. In the group of non-pregnant mice, namely the control group (K2) that was not induced by mercury chloride, the treatment groups P1, P2, and P3 were measurements of mercury levels at 24, 48 and 72 hours respectively. In the pregnant mice group, mercury levels were measured at 18 days gestation consisting of pregnant (K1) control group which was not induced by mercury chloride, mercury chloride induced at 8, 9, 10, and 11 days (PA, PB, PC, and PD). The samples obtained were then tested by the AAS (Atomic Absorption Spectrophotometry) method and then tested by One Way Anova, regression analysis and Pearson correlation test. The results showed that in mice not pregnant, the highest distribution of mercury levels in hair organs while the lowest mercury levels in the liver organs. Acute and sub-chronic retention of mercury levels in non-pregnant mice experienced an upward trend in uterine, liver, hair, and brain organs while in kidney and blood organs tended to decrease mercury levels. In pregnant mice the highest distribution of mercury levels in hair organs while the lowest mercury levels in fetal brain organs. Subchronic retention of mercury in pregnant mice has an upward trend in placental and hepatic organs while in uterine organs, kidneys, hair, mother brain, fetal visceral, and fetal brain tends to decrease mercury levels.

Keywords: *distribution, retention, mercury chloride, Mus musculus, organs, fetus.*