# Distribusi liposomal-metilprednisolon palmitat (L-MPLP) pada beberapa organ mencit setelah pemberian intra peritoneal

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Abstrak

Penelitian ini dilakukan untuk menganalisis distribusi liposomal-metilprednisolon palmitat (L-MPLP) di beberapa organ pada mencit C3H setelah pemberian secara intra-peritoneal. Sebagai formula baru, L-MPLP pada membran liposom meningkat dari 70% menjadi 95% setelah digunakan tetra eter lipid dalam komposisi liposom sebagai penstabil membran. Atas dasar penelitian tersebut, L-MPLP akan terdistribusi dengan lebih baik di beberapa organ pada mencit dibandingkan control yaitu MPLP sebagai obat bebas, metilprednisolon (MPL) sebagai standar dan liposom tanpa obat. Empat puluh dua mencit C3H dibagi ke dalam 5 grup penelitian. Setiap grup dibagi ke dalam 6 waktu penelitian. Setiap obat disuntikkan intra-peritoneal. Darah diambil dari vena ekor (menit ke 10; 30; 60; 90; 180 dan jam ke 48) dan dilakukan ekstirpasi organ (hepar, limpa, timus, ginjal dan sumsum tulang) pada menit ke setalah mencit dimatikan dengan eter. Distribusi L-MPLP dalam organ tampak jelas pada menit ke 180 dan menurun setelah 48 jam. Distribusi obat atau metabolitnya tampak menonjol pada hepar, diikuti secara berurutan oleh limpa, timus, ginjal dan sumsum tulang.

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The Distribution of Liposomal-Methylprednisolone Palmitate (L-MPLP) in Several Organs in Mice after Intra-Peritoneal Injection. This study was to analyze the distribution of liposomal-methylprednisolone palmitate (L-MPLP) as a new drug formulation, in several organs of mice after intra-peritoneal injection. In a previous study, in vitro, the stability and the incorporation of methylprednisolone palmitate into liposome membranes were increased, from 70% to approximately 95% using tetra-ether lipid as a stabilizer of the liposome membrane. Based on this result, the stability of L-MPLP should also be proved, in vivo, that the drug, methylprednisolone palmitate, could be distributed into several organs more effective than in a control group (methylprednisolone palmitate and methylprednisolone as a standard of drug and liposome). Forty-two mice of C3H were divided into 5 study groups. Each group of animals was divided into 6 sub-groups of time from 10 minutes to 48 hours. Each drug was injected intra-peritoneal, blood was drawn from the vein of the tail and the organs i.e. liver, kidneys, spleen, thymus, and bone marrow were extirpated after sacrificing the mice using ether. The distribution of the drug or their metabolites was higher at the minute of 180 and tended to decrease at the time of 48 hours after injection. The higher distribution was shown in the liver and rather high in the spleen, thymus, kidney, and bone-marrow respectively.