

酸化タンパク凝集体である酸化アルブミンの 構造・機能特性

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The structural and pharmacokinetic properties of oxidized human serum albumin, advanced oxidation protein products (AOPP).

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ABSTRACT : To determine the pharmacokinetic properties of advanced oxidation protein products (AOPP), we prepared oxidized human serum albumin (oxi-HSA) using chloramine-T (a hypochlorite analogue) in vitro. The AOPP and dityrosine content of oxi-HSA were similar to those of uremic patients. In structural analysis, the increases in AOPP and dityrosine content of HSA induced slight decreases in its alpha-helical content. In pharmacokinetic analysis, oxi-HSA left the circulation rapidly, and organ distribution of oxi-HSA 30 min after intravenous injection was 51% for the liver, 23% for the spleen, and 9% for the kidney, suggesting that the liver and spleen were the main routes of plasma clearance of oxi-HSA. These results suggest that the liver and spleen play important roles in elimination of AOPP.

抄録 今回、我々はアルブミンが過度に酸化された酸化タンパク凝集体(AOPP)の体内動態を明らかにするためにアルブミンをクロラミン-T修飾酸化アルブミンを作成した。その構造は健常人のものと比較し、二次構造の変化が観察されこの構造変化に伴い、肝臓・腎臓・脾臓への取り込みが増大していた。今回得られたデータはAOPPの体内動態を把握するための重要な基礎資料になるものと考えられる。

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