

ヒトおよび小児てんかん患者におけるカルバマゼンの血漿および唾液中濃度

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Plasma and Saliva Concentrations of Carbamazepine in Healthy Human and Epileptic Children

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ABSTRACT: The ratios of the concentration of carbamazepine (CBZ) in saliva and plasma ultrafiltrate to that in plasma were studied in 5 healthy humans and 68 epileptic children. In healthy human, the concentration ratios of saliva vs. plasma (S/P) and plasma protein-unbound fraction vs. plasma (P_1/P) were 0.272 and 0.265, respectively. A good linear correlation was found between CBZ concentrations in saliva and plasma protein-unbound fraction, and the concentration ratio of saliva vs. plasma protein-unbound fraction (S/ P_1) was 1.03. The S/P ratios of epileptic children receiving chronic therapy with CSZ in combination with additional valproate increased significantly as compared to the value of those taking drug in combination with additional phenytoin or phenobarbital. The effects of phenytoin, phenobarbital and valproate on human plasma protein binding of CBZ were examined *in vitro*. The protein binding percent of CBZ was slightly reduced in the presence of valproate, but no remarkable variation was noted in the binding with phenytoin and phenobarbital. It is suggested that measurement of CBZ in the saliva of epileptic patients provides a reliable estimate of free concentration of CBZ in plasma.

抄録 5名の健常人と68名の小児てんかん患者におけるカルマゼピン (CBZ) の血しょう中非結合濃度と唾液中濃度との関係を検討した。健常人において、唾液中濃度と全血しょう中濃度の比 (S/P) は 0.272, 血しょう中の非結合濃度と全濃度の比 (P_f/P) は 0.265 であり、唾液中濃度と非結合濃度の比は、ほぼ 1.03 であった。小児てんかん患者で、バルプロ酸併用により S/P 比が高くなったが、一般的には、唾液中濃度により、血しょう中 CBZ 非結合

濃度が推定できる。

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