ヒトおよび小児てんかん患者におけるカルバマゼピンの血漿および唾液中濃度

畠 実*，江越 教行*，原口 宏之*，
吉富 博則，小坪 淳子**，都築 裕三**

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

Minoru HATA*，Noriyuki EGOSHI*，Hiroyuki HARAGUCHI*，
Hironori YOSHITOMI，Junko KOTSUO** and Osami TSUZUKI**

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-bound 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-bound fraction, and the concentration ratio of saliva vs. plasma protein-bound 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 grug in combination with additional phentoyin or phenobarbital. The effects of phentoyin, 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 phentoyin 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_{1}/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。

* Center Developmental Medicine and Education in Kitakyushu City 北九州市立総合療育センター

** Daiichi College of Pharmacy 第一薬科大学