

Valproic acid plasma levels down with concomitant meropenem

February 9 2017



(HealthDay)—Concomitant use of valproic acid (VPA) and meropenem

(MEPM) is associated with a decrease in VPA plasma levels, according to a study published online Feb. 1 in the *Journal of Clinical Pharmacy and Therapeutics*.

Z.-P. Wen, from Xiangya Hospital in Changsha, China, and colleagues conducted a retrospective analysis of 381 VPA therapeutic [drug](#) monitoring (TDM) records. VPA [plasma](#) levels were compared in different groups to examine the change in VPA level in the drug interaction with MEPM.

The researchers found that concomitant use of VPA and MEPM was associated with considerable decreases in VPA plasma level in both the 1.2 g/day (67.3 ± 4.6 versus 15.3 ± 1.9 $\mu\text{g/mL}$; P concentration did not differ significantly for the 1.2, 1.6, and 2.0 g/day VPA + MEPM groups (15.3 ± 1.9 $\mu\text{g/mL}$ versus 18.1 ± 2.6 $\mu\text{g/mL}$ versus 9.0 ± 3.0 $\mu\text{g/mL}$; P = 0.252). The MEPM daily dose did not affect the decrease in VPA concentration (14.0 ± 5.1 $\mu\text{g/mL}$ versus 16.5 ± 1.9 $\mu\text{g/mL}$ for high versus low MEPM daily dose; P = 0.729). VPA plasma concentration recovered to a value comparable to that before MEPM initiation after discontinuation of MEPM for more than seven days (69.7 ± 4.2 $\mu\text{g/mL}$ versus 51.2 ± 8.1 $\mu\text{g/mL}$; P = 0.48).

"Our results imply that the decrease in drug concentration cannot be reversed by increasing VPA dose," the authors write.

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