



Correlation between Diazepam in Plasma and Dose in Patients in Long-Term Treatment

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SUMMARY. Diazepam, a benzodiazepine drug, has many therapeutic uses but little is known about the diazepam dose/plasma level ratio when the drug is administered for a long period of time. In the present study we determined plasma diazepam concentration in 26 patients receiving 5 and 10 mg/day of the drug. A gas chromatography/electron-capture detector method was validated for diazepam quantification in plasma using an OV 17-3% in Chromosorb W 80/100 mesh column. The use of 70:30 n-hexane: dichloromethane (v/v) as extraction solvent yielded good results. The following data were obtained: linearity from 10 to 1000 ng mL⁻¹, detection and quantification limits of 5 and 10 ng.mL⁻¹, respectively; intra and interassay average precision of 4.6 and 7.9%, respectively, mean recovery of 80.6%. The drug remained stable in the plasma sample for at least 30 days when stored at -20 °C. The relation between dose and plasma concentration did not increase in linearity when the dose was increased.

KEY WORDS: Diazepam, Drug monitoring, Gas chromatography, Plasmatic concentration.

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