P-37 - THE EFFECT OF PHARMACOKINETIC PARAMETERS ON EUPHORIA, DRUG LIKING FOLLOWING DIFFERENT ORAL HYDROMORPHONE FORMULATIONS IN OPIOID-EXPERIENCED, NON-DEPENDENT, RECREATIONAL DRUG USERS

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Introduction: One factor of opioid attractiveness with recreational abuse is the rate of drug absorption and corollary pharmacodynamic experience. In this study, the relationship between abuse potential and the pharmacokinetic profile (maximum plasma concentration [Cmax] and time to maximum plasma concentration [Tmax]) of differing formulations of hydromorphone and placebo was explored in recreational drug users.
Method: This post-hoc analysis of a double-blind, placebo-controlled, randomized, 2-phase, crossover study of subjects with histories of recreational opioid use who received single oral doses of placebo and of 2 formulations of hydromorphone: immediate-release (IR) hydromorphone 8 mg (Dilaudid®) and once-daily hydromorphone extended-release (ER) (EXALGOtm) at doses of 16, 32, and 64 mg intact and 8 mg milled to disrupt the extended-release properties of EXALGO tablets.
Results: When adjusted for dose, Cmax for all intact once-daily hydromorphone ER treatments, yielded significantly lower Cmax compared with 8-mg IR hydromorphone ($P< 0.001$). Tmax was delayed and AQ (Cmax/Tmax) was lower with all intact once-daily hydromorphone ER doses compared with 8 mg IR hydromorphone. In the 28 subjects completing all treatments and included in the final analyses, the intact
once-daily hydromorphone ER formulations had significantly lower liking and euphoria effects for the first 4 hours ($P< 0.05$) compared with the 8 mg IR and 8 mg milled hydromorphone ER tablets.
Conclusions: If liking and euphoria effects drives opioid use, then once-daily hydromorphone ER intact may be less attractive than IR hydromorphone or hydromorphone ER milled. Delaying the peak in plasma concentrations may be associated with reduced abuse liability.

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