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Evaluation of the ease of taking mini-tablets compared with other tablet formulations in healthy volunteer

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Tablets are the most widely used drug formulation. However, problems may arise in pediatric or elderly patients, whose swallowing functions are inferior. Mini-tablets (MTs) are considered easier to swallow than conventionally sized tablets (CTs). Although several trials suggest that MTs are the most acceptable oral formulation, reports comparing MTs with other tablet formulations and quantitative data for the ease of intake of a unit of several tablets are lacking. We aimed to evaluate the ease of taking MTs in comparison with that of other tablet formulations, as well as to evaluate the ease of taking different numbers of MTs. We prepared 4 types of tablets in 2 diameters (3 mm for MTs and orally disintegrating mini-tablets (ODMTs) vs 8 mm for CTs and orally disintegrating tablets, ODTs) and two formulations (MTs and CTs vs ODMTs and ODTs). Our randomized crossover trial in 18 healthy volunteers indicated that the visual analogue scale (VAS) score for the ease and amount of water required for intake of MTs was significantly lower than those of CTs. An ODMT required the least amount of water and smallest VAS score for ease of taking a tablet. The advantages of MTs, namely the ease of intake and the low amount of water required, were the most prominent for a unit comprising < 5 tablets. In conclusion, MTs could reduce the problems and risks associated with taking tablets and improve patient adherence, especially in pediatric and geriatric patients who have difficulty with taking CTs.

Biography

Shinya Uchida, PhD, received his Ph.D. degree from University of Shizuoka in 1999. Dr. Uchida served as a clinical pharmacist at University Hospital of Hamamatsu School of Medicine. He is associate professor at University of Shizuoka and his major interests include clinical pharmaceutical science, clinical pharmacology and pharmacokinetics. He has published more than 50 papers in reputed journals.

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