

Toxicology and Clinical Pharmacology

& Generic Drugs and Biosimilars

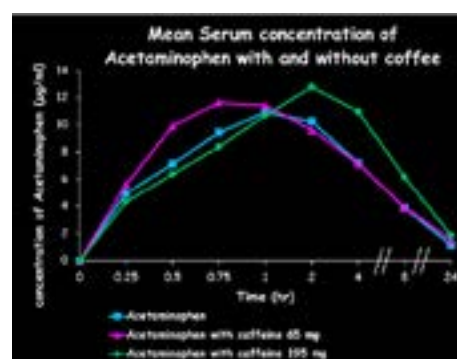
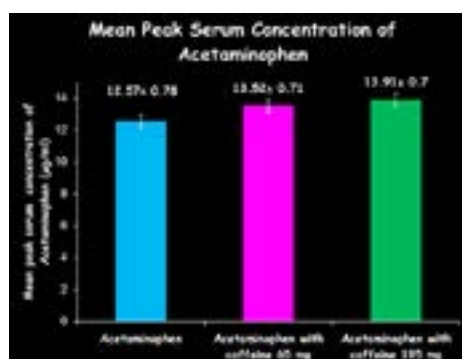
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Importance of pharmacokinetics concerning coffee

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Pharmacokinetics is absorption, distribution, metabolism and excretion of drugs. This can be changed by various factors including food and drinks. People are unaware of this pharmacokinetic change effect and will suffer therapeutic failure and toxicity of the drugs. One of the good examples is that antibiotics like ciprofloxacin (Ciprofloxacin 500 mg) taken together with milk reduce the concentration of this drug. In my study, I measured how the common analgesic, antipyretic drug Acetaminophen (Paracetamol 500 mg) can be changed when taken together with coffee containing different concentrations of caffeine (65 mg and 195 mg). The reason I chose the coffee was that most of the people drink coffee every day. Some drink 1-2 cups but some drinks 4-5 cups or more per day. There is an association between prevention of cognitive decline, and reduced risk of developing stroke, Parkinson's disease and Alzheimer's disease and lifelong coffee or caffeine consumption. In my study, I used non-steroidal anti-inflammatory drug Paracetamol (Acetaminophen) taken together with 150 ml of water, coffee 1g & 3g containing 65 mg & 195 mg of caffeine in healthy male volunteers between 20-45 years of age. Bloods were collected before the drug taken and 0 min, 15 min, 30 min, 45 min, 1 hr, 2 hr, 4 hr, 8 hr and 24 hours after taking the drugs and serum paracetamol concentration were measured by using Spectrophotometry. The results showed that there was faster absorption when taken together with coffee containing 65 mg of caffeine but slower absorption together with coffee containing 195 mg of caffeine, increased area under concentration curve and prolong excretion of paracetamol when taken together with coffee. It was suggested that it is better efficacy if paracetamol is taken together with coffee but frequent taking of this drug should be avoided to prevent toxicity of drug cause of prolonged excretion of paracetamol.



Biography

Myat Thu Thu Win received her MBBS, MMedSc (Pharmacology) from the Institute of Medicine (I), Yangon, Myanmar in 2002 and 2005 respectively. She got Japanese Government Ministry of Education, Culture, Sports, Science, and Technology (MEXT) scholarship for PhD and finished her PhD (Japan) at Graduate School of Medical Science Kanazawa University in 2013. She joined as Postdoctoral in the same University for 3 months and then doing as a Medical Consultant in Myanmar. She had not only teaching and research experience more than 7 years but also had clinical experience in Myanmar more than 8 years. She accepted offer from AIMST University in 2016 and currently working as a Senior Lecturer in the Faculty of Medicine, Asian Institute of Medical, Science and Technology (AIMST) teaching medical and dental students. She published 3 articles during her PhD study and total citation 70, H-index 3 and i10- index 2.

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