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Herb-drug interaction of *Andrographis paniculata* (Nees) extract and andrographolide on pharmacokinetic and pharmacodynamic of Etoricoxib, Nabumetone and Naproxen in rats

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Andrographis paniculata Nees (*Acanthaceae*) has been used as a traditional medicine in Asia and South Africa to treat upper respiratory tract infections, diarrhea, rheumatoid arthritis, and laryngitis. Andrographolide (AN) is one of the major active constituents of *Andrographis paniculata* Nees extract (APE). Etoricoxib (ETO), Nabumetone (NAB) and Naproxen (NP) are non-steroidal anti-inflammatory drugs, commonly used in the treatment of rheumatoid arthritis. The study investigated pharmacokinetic and pharmacodynamic (anti-arthritis) herb-drug interactions of standardized APE and pure AN with ETO, NAB and NP after oral co-administration in Wistar rats. In pharmacokinetic studies, significant changes in C_{max} , t_{max} , $t_{1/2}$, MRT, Vd, CL, and AUC of ETO, NAB and NP after co-administration with pure AN and APE has been observed. In pharmacodynamic study, significant changes in antiarthritic activity of ETO, NAB and NP on concomitant administration with APE and AN have been observed. Further studies should be done to understand the mechanism and effect of other herbal ingredients of APE on ETO, NAB and NP and to predict the herb-drug interaction in humans.

Biography

Aishwarya Balap has completed her PhD from Poona College of Pharmacy, Bharati Vidyapeeth Deemed University (BVDU), Pune, India. She is currently working as Assistant Professor in Pharmaceutical Chemistry at PES Modern College of Pharmacy, Nigdi, Pune, India. She has published 12 papers in reputed journals. She is an approved Research Guide for MPharm students in Savitribai Phule Pune University, Pune, India and currently is active in research areas like Bio-analytical Method Development, Pharmacokinetics and Herb-Drug Interaction.

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