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To Carry out the Quality Control Tests and Release Studies on Different Available Brands of Levofloxacin

Levofloxacin is a broad-spectrum, third-generation fluoroquinolone antibiotic and optically active L-isomer of ofloxacin. It is an antibiotic that is active against both Gram-positive and Gram-negative bacteria and is used to treat a number of bacterial infections including acute bacterial sinusitis, pneumonia, H-pylori (in combination with other medication), urinary tract infections, chronic prostatitis, and some types of gastroenteritis. Quality control is the set of measures and procedures to follow in order to ensure that the quality of a product is maintained and improved against a set of benchmarks and that any errors encountered are either eliminated or reduced. Invitro profile also helps us to get an idea of how drug will behave in-vivo. Different brands of Levofloxacin tablets are known to show different Pharmacokinetic parameters and release profiles. A study was planned because of lack of data about Quality Control tests on Levofloxacin tablets available in Oman.The objectives of our study were to carry out dissolution rate studies on all the available brands and to find out the best brand in terms of the Quality Control test parameters and release of the drug from the formulations. Four brands of Levofloxacin 500 mg tablets marketed in Oman were pharmaceutically evaluated via weight variation, hardness, friability, thickness, disintegration, and dissolution studies to assess their Pharmaceutical equivalence. Pharmacopeia demands that all the tablets must meet quality control standards.

A linear graph was obtained with a regression coefficient of 0.9988 using the pure drug.

UV Spectrophotometric method was used for the determination of Levofloxacin in dosage formulations and λmax chosen for analysis was 290nm.

All the brands passed the tests although the variation was observed on comparison.

In release studies, one brand showed the highest Tmax of 150 minutes with a Cmax value of 13.25 µg/ml, which is the lowest Cmax value compared to the rest of the brands. One brand however reached

its maximum concentration within 30 minutes. Although the four brands showed variation in their release properties, they met the U.S.P. Quality Control requirements. The detailed results will be presented.

Biography

Prof. (Dr.) Alka Ahuja has been serving as a Chair of Pharmacy Program at National University, Oman. She has published more than 250 articles in journals of repute. She has been bestowed with honours and awards including Global education and leadership award and best publication awards. She is serving on the editorial board and has been a speaker at several international conferences. She has handled several consultancy and funded projects and had been member of the Ethical Board. She established a school of Research in Novel drug delivery systems and her research areas include Pharmacokinetic studies, development of Dosage forms and clinical studies.