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Determination of Meloxicam in Human Plasma Administrated with Four Drugs by LC Method: Application to a Pilot Bioavailability Study

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***SUMMARY*. The development and validation of a simple and accurate method by HPLC-UV to quantify meloxicam (MLX) in human plasma and its application to comparative bioavailability study between MLX formulation and manipulated meloxicam + prednisone + cyclobenzaprine + diacerein + hidroxychloroquine is described. MLX and the internal standard (piroxicam) were extracted from plasma using protein precipitation. Chromatographic separation of meloxicam, piroxicam, other active ingredients, diacerein metabolite (Rhein) and plasma interferents was achieved with a C18 column, using a mobile phase of 20 mM sodium Hydrogen pH 3.0 and acetonitrile, with detection at 360 nm and retention times of 4.7, 3.7 and 4.1 min, respectively. The method was linear over the concentration range of 50 to 3000 ng/mL, meloxicam and piroxicam had an average recovery from plasma of 96 and 97 %, respectively. The precision and accuracy (intra-, inter-day) were less than 6 %. The method was successfully applied to a pilot pharmacokinetic study.**

KEY WORDS: Meloxicam, Bioanalytical method, pharmacokinetic study, Reversed-phase liquid chromatography.

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