Plasma- and tissue concentrations following intramuscular administration of etofenamat. Pharmacokinetics of etofenamat and flufenamic acid in plasma, synovium, and tissues of patients with chronic polyarthritis after administration of an oily solution of etofenamat

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Abstract

Studies on Plasma and Tissue Concentrations of Etofenamate following Intramuscular Application/Pharmacokinetics of etofenamate and flutenamic acid in plasma, synovia and tissues of patients with chronic polyarthritis after application of oily etofenamat solution Pharmacokinetics of etofenamate (ETO, CAS 30544-47-9; Rheumon i.m.) and flufenamic acid (FLU, CAS 530-78-9) were investigated in plasma, synovial fluid, and tissues after single intramuscular application of etofenamate to patients with rheumatoid arthritis. 62 patients with indicated operative procedure in the knee-joint received a single dose of etofenamate dissolved in oil before operation. At definite times between 1.5 and 48 h post injectionem samples from 6 patients of each time group were collected. Samples of plasma, synovial fluid, synovial membrane, muscle, bone, hyaline cartilage, and fat tissue and in some cases meniscus cartilage were taken. Concentrations of ETO and its active metabolite, FLU, were determined by HPTLC. In all tissues investigated, concentration/time courses of ETO and FLU were observed. ETO and FLU were measured first in all matrices 1.5 h at the latest 3 h post injectionem. Pharmacokinetics in tissues follows that in plasma. Rate-limiting step is the liberation of drug from the oil depot. For a long period pharmacokinetics of ETO and FLU is mainly determined by the constant liberation from the oil depot (zero order kinetics of liberation). Zero order kinetics is deduced from the linear ascent of the cumulated AUC (in percent) vs. time plot. It is directly related to the liberation of drug from the galenical formulation.(ABSTRACT TRUNCATED AT 250 WORDS)

Formats

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