

〈原 著〉

## Etofenamate の膜透過性及び経皮吸収試験

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### Membrane Filter-Permeability and Transdermal Absorption Tests of Etofenamate

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#### Abstract

Etodenamate plaster (ETplast) showed a dose-dependent ET-permeability by the membrane permeability test of the cellulose membrane and the skin in rat, while difference was hardly noted in more than 5 w/w% of ET in the base. The skin permeability of ET decreased comparing with that of the membrane filter. Moreover ET was detected in the phosphoric acid buffer solution of the receptor cell after permeation through the cellulose membrane and flufenamic acid (FA) was detected after permeation through the rat skin.

By the permeability test of the skin removed horny layer of the rat, permeable amount of each drug became to approx. twice comparing with that of the normal skin. From these results, action of the corneum as a drag-reservoir and existence of metabolic enzyme in the cutaneous tissue were suggested.

When ETplast (ET: 8.8 mg/rat) was transdermally administered in the posterior leg of the crageenin-induced foot edematous rat, high transfer of the drug was noted in the intramuscular tissues under the applied site, and its specific rate of the plasma concentration was approx. 1. The almost same concentration in the intramuscular tissues as same as ET plast was noted by oral administration of ET (10 mg/kg), while its plasma concentration was approx. 14 times. From the above-mentioned results, effect of ETplast as a targetting therapy was clarified because drug absorbed transdermally by direct administration of ETplast at the adjacent inflammatory regions is considered to be distributed effectively in the inflammatory tissues.

**Key Words:** transdermal therapeutic system, etodenamate plaster, membrane permeability, transdermal absorption