1.Abstract

Transdermal patches, specifically drug-in-adhesive (DIA) patches, have emerged as an alternative method for delivering medications such as aceclofenac. These patches provide a controlled and prolonged release of the drug through the skin, bypassing the liver's first-pass effect and minimizing adverse effects associated with oral administration. Aceclofenac, a non-steroidal anti-inflammatory drug (NSAID), is commonly used for managing chronic pain and inflammation in patients with rheumatoid arthritis. However, its short half-life and gastrointestinal side effects pose challenges for oral administration. Transdermal patches offer several advantages, including enhanced drug absorption, prolonged release, improved patient adherence, and reduced peak concentrations in the bloodstream. This study compares the drug release kinetics of transdermal patches and tablets, highlighting the diffusion parameters and dissolution studies. By exploring transdermal delivery of aceclofenac, researchers aim to extend the drug's duration of action, provide prolonged pain relief, and potentially minimize gastrointestinal side effects. Transdermal patches offer a reliable and controlled method of drug delivery, making them a promising option for improving therapeutic outcomes in patients requiring aceclofenac treatment.

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