

Formulation and evaluation of medicated chewing gum of Metaclopramide

P Mohan, S Sharma, G Parth, M P Khinchi, D Agrawal, N Sharma and M P Kabra

Kota College of Pharmacy, India

An attempt has been made to formulate new chewing gum device for metaclopramide in the form of tablet. The new drug delivery system was obtained, at room temperature, by direct compression using conventional pharmaceutical equipment. The resulting chewing gum tablets comprise a gum core combined with fillers, antioxidants, coloring agent and plasticizers, which provide smooth appearance and flexibility during storage and chewing. Drug release from a dosage form is the critical step in drug absorption and bioavailability, thus an experimental work has been designed to evaluate the efficiency of this kind of therapeutic system by verifying its capability to release the drug dose and by assessing the delivery of Metaclopramide for bypassing the hepatic first pass effect. Simple diffusion into the medium causes the release of only a small percentage of the drug contained in the medicated chewing gum, while the delivery of the major part of the dose occurs during mastication. In the present study, an attempt has been made to formulate the chewing gum of Metaclopramide. Different formulations of chewing gum with varying concentration of plasticizers like glycerol and castor oil were formulated. Better consistency of formulation and faster release of drug in saliva was obtained with glycerol F (III), and Castor oil F (II) but castor oil shows optimum result against glycerol combination, which is formulation II. Urinary excretion profile showed that within the short span of time 1.5 h drug was excreted. Buccal absorption test showed that 85% of drug absorbed within 15 min when available to the buccal mucosa at pH 5.5. Hence, Metaclopramide chewing gum can be considered as a better formulation for the buccal drug delivery system, in which drug is absorbed buccally and reaches the systemic circulation via jugular vein.

Biography

Paresh Mohan completed B.Pharm. in 2011 from Kota College of Pharmacy, Kota (RAJ.). Presently he is an M.Pharm. (Pharmaceutics) Student in Kota College of Pharmacy, Kota (Rajasthan). Paresh is having 3 International review articles and He is attended 1 National conferences in Solan (H.P.) and got 1st prize in poster presentation at national conference. His Research Guide is Dr. M.P. Khinchi is having 15 International Research Articles, 20 International Review Articles and he is Attended 12 National Conferences.

pareshmshwr90@gmail.com