

Formulation and evaluation of triamcinolon acetonid bilayer buccal adhesive film

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Background and Aims: Buccal adhesive films are new drug delivery system which make by using muco - adhesive polymer has been recently interested due to avoidance of the first pass effect and ability to sustain release for topical oral therapy. Buccal film is preferred than adhesive table and oral gels on the mucosa due to flexibility, comfort and the relatively long residence time on the mucosa. Moreover, the buccal film is able to protect the wound surface, thus reduce pain and also could treat oral diseases more effectively. The mucoadhesive film can be bilayer for unidirectional release and prevent from mouth absorbtion. The aim of the present study was to formulate the bilayer buccal films of Triamcinolone Acetonide which is used for oral lesions such as recurrent aphthous stomatitis.

Methods: The formulation of mucoadhesive films of Triamcinolone Acetonide was prepared by composed of Hydroxyl Propyl Methylcellulose (HPMC), chitosan, udragit RL , RS as one layer and ethylcelluse as second and outer layer were developed by solvent casting method. The films were evaluated for swelling study, bio - adhesive strength and in vitro drug release study by UV method.

Results: The best formulation was contains udragit RL100 and ethylcelluse. In vitro studies revealed this formulation gave longer muco - adhesion and more muco - adhesive strength and good swelling behavior. In vitro drug release study showed that90% of drug release for 6 hours.

Conclusions: This formulation is proposed as a good formula of buccal drug delivery system for oral lesions. The first layer adheres to mucosa and outer layer prevent from release drug to mouth.

Keywords: Buccal drug delivery; Triamcinolone acetonide; HPMC; Muco-adhesion