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REVIEW ARTICLE

MOUTH DISSOLVING TABLETS: GENERAL OVERVIEW AND FORMULATION ASPECTS

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Recent pharmaceutical preparations including Novel Drug Delivery Systems (NDDS) aim to enhance safety and efficacy of drug molecule to improve the treatment compliances and quality of life of patients. One such approach is "Mouth Dissolving Tablet" (MDT) which disintegrates instantly when placed on tongue, releasing the drug that dissolves or disperses in the saliva. Difficulty in swallowing (Dysphagia) is a common problem of all age groups, especially elderly and pediatrics, because of physiological changes associated with these groups of patients. The saliva containing dissolved or dispersed medicament is then swallowed and the drug is absorbed in the normal way. Some drugs are absorbed from the mouth, pharynx and esophagus as the saliva passes down into the stomach and it may produce rapid onset of action, with bioavailability of drug significantly greater than those observed from conventional tablet dosage form. Present article includes general overview and formulation aspects of MDTs making this a vital approach for enhanced patient compliance.

Key words: Mouth dissolving tablets (MDTs), Superdisintegrants, Taste masking, Patented technology.

INTRODUCTION

In recent decades, a wide variety of pharmaceutical research is directed at developing new dosage forms. Most of these efforts have focused on either formulating novel drug delivery systems or increasing the patient compliance. Among the dosage forms developed for facilitating ease of medication, and enhance the patient compliance; mouth dissolving tablet (MDT) is the most widely preferred commercial products (Dahiya *et al* 2011; Bhatere *et al* 2012; Bhimavarapu *et al* 2012). The oral cavity is an attractive site for the administration of drugs because of ease of administration. Various dosage forms like tablets, capsules, liquid preparations are administered by oral route. During the last decade, MDT technologies that make tablets disintegrate in the mouth without chewing and additional water intake has drawn a great deal of attention. The MDT is also known as fast melting, fast dissolving tablets (FDTs), rapid dissolve, rapid melt, and or quick disintegrating tablets. All MDTs approved by FDA are classified as orally disintegrating tablets. Recently, the European Pharmacopoeia adopted the term mouth dissolving tablet for a tablet that disperses or disintegrates in less than 3 min in the mouth before swallowing. Such a tablet disintegrates into smaller granules or melts in the mouth from a hard solid to a gel-like structure, allowing easy swallowing by patients. The disintegration time for good MDTs varies from several seconds to about a minute. Moreover, drug candidates that undergo pre-gastric absorption when formulated as MDTs may show increased oral bioavailability. It provides good stability, accurate dosing, and easy manufacturing. The basic approach in development of MDTs is the use of superdisintegrants, which provide instantaneous