CONFERENCE ABSTRACT

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FORMULATION AND EVALUATION OF MOUTH DISSOLVING TABLET OF NITRAZEPAM BY SOLID DISPERSION TECHNIQUE

S. R.Fulmali

Late Shri Ramraoji Gawande Institute of Pharmacy, Akola

ABSTRACT: Nitrazepam is a hypnotic drug of the benzodiazepine class used for short-term relief from severe, disabling anxiety and insomnia, it is also used to manage myoclonic seizures hence it is necessary to formulate hypnotic drugs into such a delivery system, which provide immediate relief. Solid dispersion is one of the methods, which was most extensively and productively applied to advance the solubility, dissolution rates and consequently the bioavailability of inadequately soluble drugs. The solid dispersion is based on the idea that the drug is dispersed in an inert water-soluble carrier at solid state. Several water soluble carriers such as methyl cellulose, urea, lactose, polyvinyl pyrrolidone and polyethylene glycols 4000 and 6000 are used as carriers for solid dispersion. Thus the solid dispersion technique can be successfully used for the development of dissolution of Nitrazepam. Polyethelene glycol 6000 has been used for the preparation of solid dispersion. Dissolution rate enrichment of Nitrazepam, an anti-hypnotic drug, was done by preparing solid dispersions by kneading method. Polyethylene glycol 6000 was selected as carriers. Drug Polymer ratios were taken as1:0.5, 1:1, 1:1.5and1:2 for both the polymers for the preparation of solid dispersions. Tablets were prepared from solid dispersions and by using super disingredient sodium starch glycolate, cross carmellose sodium and cross povidone alone and by taking combination of super disingredients by direct compression. Dissolution rates and drug releases of solid dispersions or their tablets containing super disingredients alone were found more than those of combination of super disingradients.

Key words: Nitrazepam, Bioavailability, Solid dispersion, Dissolution rates, Mouth dissolving tablets.

Corresponding Author: S. R.Fulmali
Email: fulmali.swati@gmail.com

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