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Formulation and Evaluation of Oral-Dispersible Tablets (ODT) of Lurasidone Hydrochloride for the treatment of Schizophrenia

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Abstract

The purpose of the present study was to develop an oro-dispersible tablet containing Lurasidone hydrochloride for the treatment of Schizophrenia and Bipolar I Disorder. Schizophrenia is one of the most severe, chronic, and frightening brain and behavior disorder. While no cure for schizophrenia exists, but recovery is possible by services like including proper medication like Lurasidone hydrochloride. The oro-dispersible tablets were prepared by direct compression method in order to achieve the rapid disintegration of the tablets by increasing the concentration of superdisintegrants. Compatibility studies were done and it was found that the drug was compatible with all the ingredients. The formulated tablets were evaluated for various quality control parameters. Overall, the direct compression method formed tablet complying with the US Pharmacopoeia specifications in terms of its shape, size, drug content, formulation strength and finally faster drug disintegration. Formulation F7 tablets disintegrated rapidly. In-vitro disintegration, in-vitro dispersion and wetting studies showed good results. In-vitro release studies of Lurasidone HCl formulations revealed that 97% drug was released from the formulations within 45 minutes. Formulation F7 showed faster drug release in comparison to the marketed formulation of Lurasidone HCl. In accelerated stability studies the tablets were found to be stable over the period of 3 months. It was concluded from the findings that we have achieved a better and stable dosage form of Oro dispersible tablets with Lurasidone hydrochloride for the effective treatment of Schizophrenia with minimal side effects.

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