

Drug Delivery Systems Currently Available in the Market for Hypertension Treatment

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Abstract

The pharmaceutical sector now offers cutting-edge medication delivery technologies. The number of methods used to combat hypertension is growing. Nowadays, antihypertensive drugs may be taken orally once a day. Polymer-coated bead delivery of propranolol, transdermal delivery of clonidine, osmotic pump and coat-core delivery of nifedipine and isradipine, spheroidal oral delivery and absorption of verapamil, coat-core delivery of felodipine and nisoldipine, and bead-based administration of nisoldipine and diltiazem (polymer-coated beads) Treat high blood pressure first by regularly bringing it down. Researchers are exploring new methods of administering medication in an effort to reduce morning blood pressure. The chronic oral administration absorption system and delayed coat osmotic pump are two methods for administering verapamil. Prolonged-release drugs have a number of drawbacks, including a lag in pharmacodynamic impact, varying bioavailability, increased first-pass hepatic metabolism, dose dumping, persistent toxicity, inflexible dosing,



increased first-pass hepatic metabolism, dose dumping, persistent toxicity, immediate dosing, and a larger price tag. Potential benefits include less frequent administration, improved adherence and convenience, less toxicity, maintained drug concentrations and pharmacological action, a reduced daily dose, and (sometimes) a lower cost.

Keywords: Drug delivery system, Anti-hypertension, Prolonged release, Pharmacodynamic impact

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