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Preclinical testing of experimental second brain drug delivery system for treating cancer: Abridged study

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This lecture will address a topics related to the use of rodent models for pre-clinical evaluation of colon therapeutics for treating colon and its related disease. Use of therapeutic micro particles and associated options. In addition to these subjects, attendees of this lecture will be familiarized with the need for rigorous and stringent testing of candidate carrier system, so that only the most promising therapies are advanced to clinical trial evaluation of efficacy when treating second brain (colon) cancer.

Background/Objectives: Efforts are being made the drug delivery to second brain (colon) by reducing drug waste, and developing innovative products. Since the dawn of development of pharmaceutical science, researchers have developed wide variety of advances in drug delivery system to second brain using various natural and synthetic materials (polymers) separately for the use of mankind. Current research interests on materials are combination of both materials (graft co-polymers) focusing on their usage and application in colonic delivery.

Material and Methods: Albino rat selected for studies. The animals were divided equally into 4 groups of 4 animals each. The first group served as control. The second group received plain drug: 5-ASA. The third and fourth group was given formulations one and two respectively. After 2,4,6 and 8 hrs animals were sacrificed and stomach, small intestine and colon were isolated. At the same time, from each animal 5ml of blood obtained by intracardiac puncture in heparinized tubes and subjected to drug concentration. The GIT parts were homogenized and the drug content was determined.

Biography

M K Dasan has total professional experience of 13 years in Industry & Teaching and currently doing research in drug delivery to colon cancer. He has authored articles in peer-reviewed journals. He has served as Head in-charge, Dept. of Pharmacy, Agra University. He did Technical Service in Dept. of Pharmacology & Toxicology, NIPER-Mohali, India. He is a Registered Pharmacist with Govt. Of India and is a great scholar (DPharm, DCA, BPharm, BLIS, MPharm, MLIS). He is a professional life member of eight official bodies in Govt. of India, including his current fellowship with Institution of Chemist India. His research interest is tailoring polymers to suit colon.

Immunotherapy with nimotuzumab in pediatric brain tumors

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The pediatric cancer prevails less than that in adults, but its tendency is to increase. In Cuba, 400 new cases arise each year, and between 50 and 60 in our Service are diagnosed from 2005. Brain tumors occupy the third place of all pediatric tumors, after the leukemia and lymphomas. 50-60 % of brain tumors originate in back cavity (astrocytomas, medulloblastomas and ependymomas), whereas 40-50 % remaining are supratentorial. Primitive neuroectodermal tumors appear in any brain space. This study shows the experiences of a clinical trial, in which is combined the human monoclonal antibody Nimotuzumab with conventional oncologic therapies in intrinsic tumors of cerebral stalk and other localizations. The results show that female sex, astrocytoma (histologic variety) and infratentorial (topographically) prevail, in agreement with the literature. 50 % of treated patients have a satisfactory response, whereas 50 % remaining disease progression. The best response is obtained for Infratentorial tumors. In conclusion, Nimotuzumab, as immunotherapy, is feasible for pediatric patients with brain tumors and therefore may constitute another therapeutic option for them.

Biography

Manuel Verdecia Jarque, MD, MSc is an Assistant Professor and has 18 years of experience as pediatric oncologist. He is the Head of Oncopediatric Service of Infantil Sur hospital. Provincial chief of Childhood Cancer Control Program. He has published 10 papers.