MANAGEMENT OF HEART DISEASES WITH CONVENTIONAL, COMPLIMENTARY AND ALTERNATIVE GROUP OF THERAPIES

(An Integrative Approach)

A Useful Guide For Ayurvedic Physicians, Cardiologists And Medical Students

Volume - I

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(An Integrative Approach)

A Useful Guide For Ayurvedic Physicians, Cardiologists And Medical Students

Volume - I

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Management of Heart Diseases with Conventional, Complimentary and Alternative Group of Therapies (An Integrative Approach) by K.C. Verma published by New Delhi Publishers, New Delhi.

Volume - I

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First Edition 2026

ISBN: 978-93-88879-51-4

eISBN: 978-93-48120-88-5

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New Delhi Publishers

90, Sainik Vihar, Mohan Garden, New Delhi – 110 059 **Tel:** 011-23256188, 011-45130562, 9971676330, 9582248909 **Corporate Office:** 7/28, Room No. 208-209, Vardaan House, Mahavir Lane, Ansari Road, Daryaganj, New Delhi, India

E-mail: ndpublishers@gmail.com Website: www.ndpublisher.in

Branch Office

216 Flat-GC, Green Park, Narendrapur, Kolkata – 700103



Portrait of Col. Sir Ram Nath Chopra (1882-1973) popularly known as Father of Indian Pharmacology and Doyen of Science and Medicine.

In Memory of Sir Ram Nath Chopra

Col. Sir Ram Nath Chopra S/O Dewan Raghu Nath Chopra, was born in August 17, 1882 at Gujranwala, Punjab. Schooling at Jammu and Srinagar; College studies at Government College, Lahore; In England Chopra joined in Downing College, Cambridge in 1903. He worked with famous Dr. Walter E. Dixon, a famous pharmacologist and first professor of pharmacology in that college. R.N.Chopra's thesis title was "Action of drugs on ciliary movement in the respiratory tract". In 1905 he was admitted in B.A. after qualifying for Natural Sciences Tripos. While studying at Cambridge he joined in Barthelomew's Hospital, London and competed for the Indian Medical Service (1908) and got third place in merit. He also obtained Cambridge M.B. and M.D. and the London M.R.C.P. He was awarded the Sc.D. degree of Cambridge University for his contributions to the science of medicine. The Royal College of Physicians of London elected him as a Fellow. For about 12 years he worked as young IMS officer first in East Africa and then in Afghan war. In 1921, he joined as First Professor of Pharmacology in Calcutta School

of Tropical Medicine to teach PG students, became director of the institution in 1934. Along with this position he also chaired the Pharmacology at Calcutta Medical College to teach UG students. His hand in developing the Pharmacology laboratory at School made it a well equipped best laboratory equal to those in UK. He served the school till 1941 (i.e., for 20 years). After retirement in the same year the Government of J & K appointed him as Director of Medical Services and then appointed as Director of Drug Research Laboratory where he served the lab till 1960. His ambition was observed as bringing modern pharmacology from the traditional materia medica. He is well known for his Experimental Pharmacology. He is the First person in establishing a research centre for pharmacological work. He enormously worked in the area of General Pharmacology and Chemotherapy. Most particularly his work areas covered studies on Indigenous drugs covering their chemical composition, invitro & invivo tests for the active principles, biochemical & biophysical changes in mammalian organism; surveys on drug addiction, Drug analysis etc.

The department of Pharmacology at Calcutta School of Tropical Medicines stood as land mark for other researches also covering clinical evaluation of drugs, tropical medicine, therapeutics, experimental pharmacology, toxicology, drug standardization and biological assays, diagnostic services etc. His work on indigenous drugs inspired many other institutions to join their hands in the research of that area. With his continuous research various indigenous drugs like ispaghula, kurchi, rauwolfia, psoralea, cobra venom, etc. were proved to have pharmacologically active principles and got place in Indian Pharmacopoeial List 1946 and Pharmacopoeia of India 1955

He also contributed a lot for Indian systems of medicine. One of his great contributions was utilize under the chairmanship of Drug Enquiry Committee in 1930-31 during which period he roamed throughout India and given provoking recommendations to the Govt. of India due to which a seed of pharmacy profession has taken birth. With his recommendations Prof. Mahadev Lal Schroff got inspired and started Pharmacy course first time in India in 1932 at Banarus Hindu University. And also Drugs Act 1940 was framed which was later changed as Drugs and Cosmetics Act in 1962. Later Ayurvedic (including Siddha) and Unani drugs were also under its coverage in 1964. Government of J & K appointed him as Director of Medical Services and then appointed as Director of Drug Research Laboratory (his personal Laboratory which he donated to the Government of India, Previously called Drug Research laboratory then Regional Research Laboratory and now it is known as Indian Institute of Integrative Medicines) where he served the lab till 1960. He died in Srinagar, in june 13,1973.

Foreword



डॉ. राम विश्वकर्मा निदेशक Dr. Ram Vishwakarma Director



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Prof (Dr) K.C Verma MBBS, DCH, MD, DM has a brilliant record of academic achievements and vast teaching experience in the discipline of medicine and cardiology and has held different positions in medical education at Govt. Medical College, Jammu. Dr Verma is practicing medicine for more than 30 years in the city of temples at Jammu Heart Clinic, Jammu (J&K). Besides his clinical practice, he is also very much interested in clinical research and non-invasive techniques in cardiology. He has published more than forty research papers in the medical Journals of repute which has brought him due appreciations from medical fraternity from all over the world. In recognition to his contributions in medical field, he was awarded prestigious Fellow of International College of Physicians, USA and Fellow of Royal Society of Tropical Medicine and Hygiene, London. In the year 2008, he was conferred the prestigious 'Glory of India Award' by India International Friendship Society on the day of Parvasi, Bhartiya Divas during international conference at New Delhi and award of Gold medal & Fellowship of Cardiological Society of India (FCSI). In addition, he is also recipient of Best Citizen of India award by international publishing House, New Delhi. Dr Verma has written 10 books on different aspects of cardiovascular medicine which are published by reputed Indian Publishing houses. His current book is on "Management of Heart Diseases with Conventional, Complimentary and Alternative Group of Therapies" (An Integrative Approach). It has been written with basic concept of integrating systems of traditional medicine and modern medicine so that patient with particular disease is treated confidently with the application of either stand alone or combined therapeutic techniques with least cost and minimal side effects. Opening chapters of present volume details the introduction of alternative, complimentary and modern medicine, where the author explains the classification, pathogenesis, diagnosis and treatment according to the ancient disciplines of Chinese, Buddha and Indian Ayurveda. The author also enlightens the readers regarding three doshas i.e. kapha, pitta and vatta and five natural elements i.e. fire, water, air, akash and earth which become the key factors for not only the causation of different bodily ailments but also guides us in their management

Dr Verma not only discusses the diagnosis and management of various cardiovascular diseases by modern medicine but he also integrated these with oldest discipline of Ayurveda and AYUSH. He has proved his point by citing research where patients with angina, heart attack and rhythm irregularities can be effectively managed through therapies under AYUSH systems of medicine. Similarly he has also touched upon the diseases like obesity, diabetes mellitus, venous insufficiencies, menopause, hematological disorders, vitamin/mineral deficiencies and mental stress which can be very well treated with AYUSH therapies.

I am sure this book would be of immense interest to both undergraduate and postgraduate students, physicians and general practitioners of AYUSH. It will also prove to be a handy guide to the students and physicians of modern medicine who would like to integrate AYUSH systems with allopathy in the management of their patients with least complications and minimal cost.

(Ram Vishwakarma)

ANNOTATION

Biotechnology and its Role in Complimentary and Alternative Medicine (CAM)

Most of the healthcare modalities accompanying CAM practices have been poorly accepted by the medical group owing to poor understanding or lack of scientific evidences regarding their productiveness as potential therapeutic interventions. The use of CAM in public healthcare domain has, thus, remained a controversial issue generating a huge debate. There is a reasonable requirement of another, evidence-based research approach for evaluation of productiveness and effectiveness of the CAM therapies and their development which would further influence people's individual choices regarding exertion of certain CAM therapies in accordance to their clinical condition. Researchers across the globe have been conducting scruplous research on a large-scale on several natural products and alternative therapeutics for the betterment of current CAM industry. There are number of examples can be cited which could possibly indicate the essentiality of Biotechnology in understanding the putative efficacy and effectiveness of CAM in certain diseases. Some of these are as follow:

- 1 . Various studies are being carried out by the Johns Hopkins Center for Cancer Complementary Medicine for assessing the antioxidant, anti-inflammatory, pain relieving of certain herbals and prayer in African women with breast cancer.
- 2.T he clinical productiveness, mechanism of action and safety of hyperbaric oxygen therapy is being assessed by the University Of Pennsylvania Specialized Center Of Research in Hyperbaric Oxygen Therapy for the treatment of various types of cancer of head and neck and its putative negative effect on the disease progression.
- 3. Andrographolide, a bioactive chemical found in Andrographis paniculata and its derivatives have been found to have important therapeutic activities such as anti-inflammatory, antibacterial, antidiabetic, antitumor, anti-viral, anti-feedent. It is also known to have important activities that fights against cardiovascular disease, platelet activatrion, infertility and NF-kB activation (Jayakumar, Hsieh et al. 2013).
- 4.. S-adenosyl-L-methionine (SAMe), a major methyl component found in the brain and involved in many metabolic pathways, is found to have anti-depressant properties and helps in treating dementia (Mischoulon and Fava 2002).
- 5. Mind-body interventions like yoga and meditation has found to have an important role in fighting depression sleep disorders etc., and increasing youthfulness and longevity. Detailed research has indicated that they have significant effect on the levels of certain mind-body hormones such as dopamine, serotonin, cortisol, DHEA, GABA, endorphins, melatonin, growth hormones etc.
- 6. A recent study by the Universities of Coventry and Radbound have shown that mind-body interventions like meditation, yoga and Tai Chi influence molecular changes in DNA and can help reverse the molecular changes related to various ailments (Buric, Farias et al. 2017). Activity (Epel, Puterman et al. 2016; Conklin, King et al. 2018).

I have been associated with DR. K C VERMA DM, cardiologist of repute for more than 20 years and from time to time saught his guidance in selected projects on human genetic particularily human genome. Currently I am associated with him on a newer project highlighting the role of telomere length in chronic cardiovascular disorders such as hypertension, stroke, myocardial infarction and diabetes mellitus. Dr verma has also written a chapter in this book "management of heart diseases with conventional,complimentary and alternative group of therapies." on telomere shortening in chronic cardiovascular ailments and its recovery by administration of various herbal medicines. I have gone through the various topics of this integrative cardiology and found it very informative in managing the heart ailments with combined approach of modern medicine and traditional medicine under the main discipline of AYUSH. This book is a power house of knowledge in integrative medicine and would be of immense help to the researchers of biotechnology, undergraduate and postgraduate students of both modern medicine and AYUSH disciplines

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Preface

Indian ancient methods of treatment ie AYUSH (Ayurveda, Unani, Siddha and Homopathy), almost disappeared from India in a phased manner or restictricted to only a few clergy people, sadhus and Hakeems and that too for the benefit of influential personalities like Raja, maharajas and top rich individuals of this country. English rule which lasted more than 100 years brought lots of changes not only in administration but also in workings of common man's, life. During this peried, among many other alterations and modifications, they also shifted the discipline of Allopathy, also called modern medicine for the treatment of various illnesses prevailing in this country. Discipline of modern medicine became more popular than AYUSH due to its well planned research on animals and human volunteers, teaching in medical colleges and training of doctors and specialists. Medicines for different diseases were manufactured and classified after 5-10 years of research. Treatment prescribed to patients was later monitored for their curative effects and various side effects. Currently, physcians of modern medicine, practicing more than 30 years, did find that modern medicines and its techniques alone are not free from life threatening complications. With renewed thinking over the past one decade or so, AYUSH has become a well planned discipline and almost introduced in each state of united India. This discipline too like allopathy hac been supported with research, teachings in colleges and inventing newer medicines and techniques and therefore, is being accepted as an alternative system to allopathy with greater confidence.

This book has been written with basic concept of integrating both disciplines of AYUSH and modern medicine so that patient of particular disease is treated confidently with the application of either alone or combined therapeutic techniques with least cost and minimal side effects. Starting chapters details the introduction of alternative and complimentary medicine when compared to modern medicine and classification, pathogenesis, clinical features and categorization of different medicines of AYUSH according to three Doshas i.e. Kapha, Pitta and Vatta and five natural elements i.e. Fire, water, air, akash and earth. Research has shown that patients with angnia, heart attach and rhythm irregularities can be effectively managed with AYUSH technology including acupuncture. Similarly diseases like obesity, diabetes mellitus, venous insufficiencies, menopause, hematological disorders, vitamins minerals deficiencies and mental stress can be very well treated with AYUSH group of therapies. Heart failure which is the end result of many diseases like congenital, acquired heart diseases and hemodynamic disturbances is usually managed with modern and AYUSH medicines, but can also be treated with specially designed devices as alternative to conventional therapies. As an alternative to surgical intervention in the management of valvular heart diseases, non-surgical percutaneous transcatheter fitting of artificial valves has been the procedure of choice. Enhanced External Counter Pulsation (EECP) therapy which is a simple, noninvasive and alternative solution to the complex problem of angina pectoris has been briefly discussed. To keep our body fit and healthy, an account of balanced diet, calories and exercise have been cited with illustrations Role of homeopathy, aromatherapy, Transcendental Meditation, Electromagnetic Waves, Reiki and Acupuncture in maintaining human health has been briefly outlined. Kundalini Awakening and Yoga as alternative methods are being frequently combined with conventional treatment with better results in heart patients with open heart surgery. Application of TAI CHI AND OIGONG discipline, music and Herbal therapies for the prevention and management of cardiovascular disorders has been thoroughly discussed.

AI, or Artificial Intelligence, refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving. Since it is a newer technology its wider application in medical science is well established, I there, added a few chapters such as Ocular images-based Artificial Intelligence In Diagnosis of Systemic Diseases Including Cardiovascular Ailments, Artificial Intelligence-Based Smart Comrade Robot for Elders Healthcare, Applications of ChatGPT In Medical Practice, Education and Research and Health Implications of human body earthing to the Earth's surface electrons.

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