QUALITY CONTROL AND STANDARDIZATION OF MEDICINAL AND AROMATIC PLANTS — FROM CULTIVATION OF MEDICINAL PLANTS TO ITS CLINICAL APPLICATION

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In spite of recent developments of antibiotics and newer synthetic drugs, a vast majority of people depend on traditional medicines for their primary health care needs and it can safely presumed that a major part of traditional therapy involves the use of plant extracts or their active principles. In the recent years with ever growing commercialization in the field of herbal medicines, there has been an instant demand for quality control of the drugs used in this system. The studies on the identity, purity and quality of the genuine drug will enhance information in checking the adulteration. A set of standards would not doubt be deterrent on substitution and adulteration and also an aid for ‘drug law enforcement’. The present talk incorporates study from birth of the plant to its clinical application which is a dire need for all concerned to have knowledge of GAP, GFCP, GLP, CGMP and the possible adulterations. All modern instrumentation used for quality control will be discussed with special reference to GC/MS for aromatic plants. Besides above protocols, this study deals with approaches towards establishing the safety and quality starting from preliminary examination of a medicinal plant, its morpho-anatomical, pharmacognostic, physicochemical and analytical parameters, foreign organic matter, pesticide residue, radioactive and microbial contamination, chemical assay, finger printing of different extractives using modern extractors, chromatographic and spectroscopic techniques, phytochemical screening, quantitative analysis of inorganic constituents and standardization with special reference to marker compounds in plant species and their fingerprinting along with its modern perspectives. Different stages, i.e. quality control studies of raw medicinal plant, controlled studies on method of processing, quality control studies of finished phyto medicines, standardization procedures at each stage from birth of the medicinal plant up to clinical application of herbal medicine have been described. Emphases have been given on the protocols which are required for registration of phytomedicines.

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