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An Overview of Dravyguna in Ayurvedic Pharmaceutical Sciences Curriculum

Amritpal Singh, Senior Lecturer and Saurabh Singh Baghel, Lecturer

Dept of Ayurvedic Pharmaceutical Sciences, Lovely Professional University, Phagwara
Address for correspondence:
Dr. Amritpal Singh
Department of Ayurvedic Pharmaceutical Sciences
Lovely School of Applied Medical Sciences,
Lovely Professional University
Jalandhar-Ludhiana G.T. Road,
Phagwara (PUNJAB) INDIA

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Curriculum related to Ayurvedic Pharmaceutical Sciences has been recently reinforced in Indian pharmacy schools due to global acceptance of Ayurveda. Some pharmacy schools have continued curriculum related to Ayurvedic Pharmaceutical Sciences as integral part of pharmacognosy or medicinal chemistry. Some pharmacy schools pioneered courses related exclusively to Ayurvedic Pharmaceutical Sciences. The courses available range from diploma to master's level however there is little information has accumulated for doctorate and postdoctrate level studies in Ayurvedic Pharmaceutical Sciences.

Curriculum related to Ayurvedic Pharmaceutical Sciences largely bank on Dravyguna (Phytopharmacology) and Ras Shastra (alchemy or latrochemistry). Dravyaguna is essentially compilation of ancient medical knowledge based on Ayurvedic pharmacy lexicons. Charka and Sushruta lists 341 and 395 medicinal plants respectively, in treatise on Ayurveda. Bhavprakash Nighantu, the standard book on Ayurvedic perspective of medicinal plants, mentions medicinal actions and therapeutics of 470 medicinal plants.

With evident of Muslim and British Empire in India, translation of Ayurvedic pharmacy lexicons was carried out in several languages. Maximum work was done in the British period when indispensable texts like Materia Medica of India and Pharmacogaphia Indica were composed. The term Materia Medica has largely been replaced by pharmacognsoy. Several publications have highlighted decreasing popularity of pharmacognosy in British and American Universities. Pharmacognosy either has been merged with medicinal chemistry or withdrawn from the pharmacy curriculum. However, Asian countries have witnessed changing scenario as far as traditional system of medicine are concerned.

Recent times have witnessed resurgence of medicinal plant industry in India and there is revised interest in subjects like Dravyguna. Introduction of courses related to Ayurvedic Pharmaceutical Sciences is proof of changing scenario as far traditional medical sciences are concerned. One side of the story is that synthetic medicine might have overshadowed the traditional systems of medicine, more specifically known as Complementary and Alternative Medicine (CAM). Other side of the story is encouraging as far as herbal drug industry as medicinal plants are being constantly explored for lifesaving and cost-effective drugs.

Shortage of trained manpower in Ayurvedic pharmacies, has forced the statutory bodies to introduce industry specific courses related to Ayurvedic Pharmaceutical Sciences. Introduction of maters course in Traditional Medicine by Mohali based National Institute of Pharmaceutical Education and Research is important landmark in the history of Ayurvedic drug industry.

Recent publication of article on heavy metal contents of Ayurvedic formulations in Journal of American Medical Association (JAMA) has rocked the Ayurvedic drug industry particularly the metal based preparations. Even recent market analysis has reported decreased sale of mineral remedies of Ayurveda. In light of above developments, systematic study of Dravyguna becomes mandatory as utility of Ras Shastra in Ayurvedic drug industry is expected to suffer after JAMA article.

Dravyguna is integral part of course related to Ayurvedic Medical and Pharmaceutical Sciences. The traditional mode of Ayurvedic study i.e. BAMS, incorporates Dravyguna in the third year of six year course. Postgraduate and doctorate study options are available for Dravyguna. Curriculum related to Ayurvedic Pharmaceutical Sciences is largely based on Dravyguna and options are available for M.Pharm in Dravyguna.

Although it is difficult to correlate Dravyguna with modern subjects, it reaches close to clinical pharmacology and some aspects of pharmacognosy. Recently reverse pharmacology has been used for Ayurvedic Medicine and on basis of this; Dravyguna can be correlated with reverse pharmacognosy. Some experts are of the view that Dravyguna should not be compared with any subject and treated as independent subject.

Dravyguna is in transition phase and time is ripe to arrive upon a decision whether it should remain conventional or given a fresh look. Curriculum issued by Central Council of Indian Medicine (CCIM) for BAMS course and post graduation in Dravyguna need rectification keeping in mind the changing scenario. Dravyguna has no doubt contributed to modern medical system by giving lead which has been converted to lifesaving drugs. Even subjects like ethnopharmacology, phytopharmacotherapy and phytopharma-covigilance have roots in Materia Medica of traditional medicine.

Dravyguna is fundamental subject of Ayurvedic Pharmaceutical Sciences and recent developments must be integral part of curriculum related to Dravyguna. The subject can serve as search engine for novel drugs and recently chemoinforamtics approaches have been applied to classical Ayurveda for searching novel chemical entities.