

Editorial

Safeguarding Ayurvedic therapeutics: Need of the hour

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The armamentarium of Ayurvedic medicines is equipped with drugs from natural sources viz. vegetable, animal and mineral in origin. The important Ayurvedic texts such as *Charaka Samhita* and *Sushruta Samhita* documented numerous formulations for the management of various diseases. The analysis of *Materia Medica* of these works indicate that herbal medicines dominated the therapeutics and other sources i.e. animal and mineral drugs were also employed in a limited manner and this trend continued up to 8th Century A.D. During medieval period, a novel school of medicine namely *Rasashastra* was introduced into therapeutics and was slowly incorporated into Ayurveda. This amalgamation revolutionized Ayurvedic therapeutics and the scholars like *Vrinda*, *Rasavagbhata*, *Chakrapanidatta*, *Sodhala*, *Vangasena*, *Sharangadhara* designed many herbo-mineral formulations and strengthened the armamentarium of Ayurvedic physician. The drugs which were slow acting requiring larger dose were substituted with fast acting in smaller doses and with a better shelf life. This metamorphosis had given a good fillip to Ayurvedic system. At that point of time the biochemistry and other allied medical sciences were not known, the public were not having faintest doubt about the adverse effects of these formulations on vital organs like kidney, liver, spleen, etc., A careful review of texts on *Rasashastra* indicates *Rasacharyas* had the pharmacovigilant attitude as the side effects of improperly processed drugs were reviewed and an emphasis was laid down on the proper adaptation of purificatory procedures in the manufacture of *Rasaushadhis*.

Herbs play a pivotal role in purification and preparatory procedures of *Rasaushadhis*. They are helpful to detoxify the poisonous substances, increase the absorption of active ingredients and potentiate the activity. Till 18th Century A.D., the physicians religiously followed the prescriptions recorded in Ayurvedic texts without any element of doubt in their mind. During 19th Century A.D. with the advent of modern science, the scientists started to find out the rationality with regards to their mode of action from modern scientific perspectives.

Following the pioneering and monumental work of Sir R. N. Chopra and his colleagues in the early part of 20th century, there has been a tremendous upsurge of interest for conducting research on indigenous medicinal plants. The first research enquiry with scientific parameter was attempted by Prof. C. Dwarakanath and findings were published in the monograph entitled *Gold therapy in Tuberculosis* (1931). The first Ayurvedic research centre was started at Jamnagar (1956) to screen hematinic action of Ayurvedic formulations like *Punarnava-Mandoora*, *Navayasalauha* and *Kaseesa Bhasma*.

Modern medical scientists opined that heavy metal containing Ayurvedic formulations are nephrotoxic and injected this into the minds of public. The public having convinced about the safety of herbal medicines started preferring them to chemical/synthetic medicines. The report published in *Journal of American Medical Association (JAMA)* stating that heavy metal content of Ayurvedic herbal medicine products (Saper R B *et al.*, *JAMA*. 2004 Dec 15;292 (23):2868-73) has come out just like a bolt from the blue causing a severe threat to Ayurvedic herbal remedies. Another jolt to Ayurvedic therapeutics has come with the United Nation's pushing for ban on mercury contained pharmaceuticals and use of mercury in medicines for commercial purpose from January 2013. All these threats are going to challenge the very existence of Ayurveda within and outside the country. Ayurvedic fraternity has to initiate redressal measures to resurrect this system.

Forest reserve is depleting at a faster rate and procurement of medicinal plants from wild source will become a difficult task in coming years. It is a known fact that most important medicinal plants used in various classical Ayurvedic formulations have entered into endangered category. Erratic procedures while collecting medicinal plants is resulting in the expansion of the list of endangered species. *In situ* and *ex situ* conservation and cultivation of medicinal plants is the only measure to save them from extinction. Pharmaceutical companies are cropping like mushrooms without establishing any quality control laboratories. Government of India should insist every company to show 5-10 acres of land for cultivation of medicinal plants for issuing licenses to start a pharmacy. Central Council of Indian Medicine (CCIM) has laid down minimum standards to start an Ayurvedic college for strengthening standards of Ayurvedic education and on similar lines the cultivation of medicinal plants and requirement of land for this purpose should be made mandatory to avoid the adulteration of crude drugs.

Several laws have come into force for protection of animal life and one cannot kill musk deer for collecting *Kasturi* and deer to collect its horns. The substitute suggested by *Bhavamishra* i.e. *Kankola* for *Kasturi* should be presently studied and the medicinal plants like *Pushkaramula* or *Arjuna* may be tried to substitute for *Mrigashringi Bhasma*.

Well-planned clinical trials should be conducted with the formulations containing heavy metals on a larger population to establish their safety profiles which may help for sustenance of *Rasaushadhis* in clinical practice.

National Medicinal Plant Board (NMPB), Department of AYUSH, Central Council for Research in Ayurvedic

Sciences (CCRAS) is adopting some measures to redress these threats, but their efforts are to be geared up. The current research in Ayurveda is reduced to drug evaluation on modern scientific methods ignoring the Ayurvedic principles. Tons of research papers are being published in national and international journals, but this exercise is not found to strengthen Ayurveda. Prof R.H. Singh, Emeritus Professor of Banaras Hindu University opines “Research is the prime need of contemporary Ayurveda, but modern research on Ayurveda has not been very rewarding for Ayurveda itself. Much of it uses Ayurveda to extend modern bioscience. In contrast, Ayurveda needs research designed to test and validate its fundamental concepts as well as its treatments. In this context, if Ayurveda is to be truly explored and validated in all its aspects, scientific inputs should conform to Ayurveda’s principles and philosophy. While its evidence base, established since antiquity, may need further verification, research should now focus on the science

of Ayurveda, rather than merely looking for new drugs based on Ayurveda herbals; in-depth research is needed on Ayurveda. Such research will require teamwork between scientists and *Vaidyas* based on truth and trust”.

In this issue, a review article on Charakottaratantra and another on relationship of Ayurveda with Jyotish are included which are interesting and informative.

In total five review articles, eight clinical research papers, a case study on Lumbar Spondylolisthesis, three papers on pharmaceutical standardization and four papers on pharmacological studies are also published.

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