

Need to develop Ayurvedic Research Methodology for evidenced based Ayurved**Dr. Deepa Bhanage**

Associate Professor, ARAC Manchi Hill

Dr. Mandar Bhanage

Associate Professor, ARAC Manchi Hill

Ayurved is the most ancient medical system of India. It is one of the most prosperous heritages of Indian culture. The word Ayurved literally means the science of life. This meaning itself indicates its greatness. The system which guides us to be healthy and stay away from any physical, mental or spiritual illness throughout the life is Ayurveda.

We are almost five thousand years away from the era when Ayurveda was developed and practised uniquely. And still now, the principles of Ayurveda are not changed. Every hypothesis takes a lot of time to be tested by various tough examinations and it has to undergo several modifications by experts to be established as a theory or principle. As the definition says,

“Siddhanto nam sa yah parikshakair bahuvidham parikshya hetubhishcha sadhayitva sthapyate nirnayah |” – Cha. Vi.8/37

This proves the scientific and logical basis of Ayurveda. Origin of every research is a problem for which probable solutions are to be found out. What are the present problems Ayurveda is facing for which research is needed?

Need for research in Ayurveda

‘Research’ means search for knowledge or invention or revalidation. Research aims at finding out new facts or verifications of the old facts by means of logical and systematised methods. There is a need of research in Ayurveda at various levels.

- The first and foremost is the student of Ayurveda. Most of the Ayurvedic literature is available in sanskrit and though it is translated into regional languages upto some extent, it is not sufficient to fulfil the demands of a student. The terminology and concepts of ayurveda should be very clear to draw interest and faith of the students on our own system. So, at institute level along with the theoretical knowledge, the practicality of Ayurveda should also be taught to enrich our science. Essential fundamental and literary researches are needed in this respect.
- The next level is of a post graduate scholar. Having all the basic knowledge of Ayurveda, a post graduate scholar needs to have command over each and every aspect of their own speciality. Because these are the people who will be called masters of Ayurveda and are supposed to give answers

to the modern world. In their hands resides the future of Ayurveda in the coming era.

- An Ayurvedic practitioner is one of the important factors of Ayurvedic system for whom research is needed. Because he is the only person who everyday comes across number of patients and who must have greatest practical knowledge along with strong theoretical basis. In this situation the methods by which the treatment becomes effective with ease of administration, economy and also treatment for emergencies as well as leading problems like autoimmune disorders, cancer, cardiac problems, skin diseases, obesity, AIDS, etc. where modern science has very limited treatment measures, are to be found out for which research is needed.
- Another large area where research has the prime importance is pharmaceutical companies. Thousands of preparations of various drugs are mentioned in Ayurvedic texts. The formulae which are already mentioned in texts are being prepared and tested by conducting several clinical trials and then only they are handed over to the patients. Similarly, according to the need of patients and as per disease patterns, various

patent medicines are also prepared by the pharmacies. Everyday number of new preparations are launched into the market which is not an easy task. The form of medicine, its appearance, way of administration, dosages are becoming patient-friendly and cost-effective day by day. For this huge need, lot of research work and also research workers are needed.

- Our classics are the base of Ayurveda. Much of knowledge is told in very small sutras which has to be understood thoroughly and applied. Hence, from the view point of classics also research is very important. As we already discussed, every principle of Ayurveda is an established one and on the basis of evidence only, samhitas were written in sutrarupa. In those days knowledge was gained by pratyaksha, anumana, aptopadesha and yukti and then only it was applied over drugs, diseases and patients. Many numbers of observations of same phenomenon in various factors of nature made them to form hypothesis. Then those were proved and established as principles. This whole procedure took hundreds of years. But present world demands proof for every mini micro thing in its own language. So, though our science is developed one, we have to revalidate all those concepts before the modern world by means of proper research. As it is said,

“pratyaksham hi alpam, analpam apratyaksham”

Most of the knowledge of this world is gained by anumana and other pramanas and very few things come under the scope of pratyaksha. The prime motive of Ayurveda is,

“swasthasya swasthya rakshanam aaturasya vikara prashamanam” – Cha. Su.30/26

First of all, Ayurveda developed ways to maintain positive health including dinacharya, ritucharya, sadvritta, rasayana etc. Because of not following these regimens when diseases developed, then it described detailed etiopathogenesis of every condition and also found their solutions. So, Ayurveda has never denied the need of research in its development. Hence the later texts like Madhavidana has added many new diseases not

described by brihatrayis. Same way Bhavaprakasha and other nighantus described new drugs.

“nasti dravyam anaushadham”

States importance of research in Ayurveda.

- Government has many different issues towards Ayurvedic research. Standardisation of Ayurveda, standardisation of panchakarma as it has become icon of Ayurveda worldwide, standardisation of Ayurvedic drugs and preparations, cultivation of medicinal plants to save the species in danger, etc.

There is a huge scope of research in Ayurveda from the view point of each factor mentioned above. For carrying out any research, there should be some steps or procedure by which a hypothesis is studied. Such systematic procedure is called methodology. Ayurveda has its own research methodology. Eg. Pancha anumana vakya consists of pratidnya, hetu, udaharan, upanaya and nigamana which respectively means the hypothesis, supportive theory or experiment, example having same phenomenon proved, acceptance of hypothesis and establishment of a principle. Similarly, many concepts like nidana panchaka, shat kriyakalas, janapadodhvamsa, vikara vighatakara bhavas etc. are nothing but the excellent examples of highly developed research methodology in Ayurveda.

Still there are many issues in the development of Ayurvedic research methodology.

- For undergraduate students, though literary research is carried out, it is very difficult to understand the concepts of Ayurveda thoroughly. Misconcepts and comparison of each and every terminology with modern science again worsens the situation.
- Regarding post graduate scholars, research is meant for the development and strengthening of Ayurveda as a system. But practically, problems arise just at the starting of research work. The topics chosen are mostly biased. Because either the student can't afford the research expenses or just for passing the examination and getting the degree, mostly easy or already studied topics are chosen for thesis. Even after choosing the topic, new ideas cannot be incorporated

because of lack of proper parameters for their assessment.

In case of disease or drug or any other research work, when we apply the parameters mentioned in classics, those are not accepted by the modern science and if modern parameters are applied for each and every Ayurvedic research, those are insufficient to express the results of our study in true sense and the question of strengthening Ayurvedic methodology remains unsolved.

Eg. If a patient comes with symptoms of osteoarthritis, investigations like X-ray, MRI scans are used to confirm the diagnosis. Similarly, there are hundreds of investigations in modern system like radioimmuno assays, haematology, culture sensitivity, radiology etc. which show every minute change occurring in the course of a disease or treatment in body tissues. But these parameters cannot be applied to our nidana panchaka. Even if OA is significantly cured by Ayurvedic treatment, no change can be found in X-ray findings.

Like this for almost every disease we are hugely lacking the parameters. Due to such inhibitions, many concepts and facts which are practically very useful in the diagnosis and treatment are still untouched.

Another important thing is that the hospitals where PG researches are carried out have patients of specific income group. So, random selection is not possible and the study becomes biased. Also frequently admitted cases are mostly of vatavyadhis, skin diseases, anorectal diseases etc. so, maximum studies are carried out on limited group of diseases and other large area of Ayurveda is still in dark. The need of research to strengthen Ayurveda in all aspects is not fulfilled due to lack of sufficient number of patients.

- Ayurveda practitioner is a true implementer of research methodology. He often plays the role of a bridge between patient and pharmaceutical companies. No pharmacy can directly deal with patients unless there is master hand of practitioner. Because he can better understand the need of patient as well as strategy of pharmacies. But in practice, large no. of practitioners seem to be more interested in using cost effective raw drugs and medicines rather than their authenticity and effectivity. Some of them use high

quality medicines and many anubhuta yogas as in vaidya parampara. But that knowledge is kept reserved. Many practitioners work hard to find newer ways of diagnosis and treatment but are lacking the standard Ayurvedic research protocol for documentation and presentation of cases. Due to all these reasons nothing is added into the existing knowledge of Ayurveda.

- Pharmaceutical companies are one of the greatest source of research in Ayurveda. They are supposed to do all types of research constantly including literary, fundamental, drug research, clinical trials etc. to find out different medicines as per the need of time.

In case of drug standardisation; collection, identification, morphology, chemical and biochemical properties etc. have to be studied. Then drugs are standardised on the basis of active ingredient present in it. Here also the problem of parameters arises. Because in Ayurveda, drugs are described on the basis of their rasa, guna, virya, vipaka, prabhava, karma and on the modern parameters we cannot assess these entities.

Even if the active ingredient / alkaloid is separated, its proportion varies in the same species collected from different desha and different kala. To avoid this, the drug has to undergo processes like TLC, HPTLC etc. Various samples are taken from different places and the average proportion of each alkaloid present in them is calculated and standardised. Their proportion in the compound preparations should be taken more or less than that mentioned in texts depending upon the proportion of alkaloids present in them as per standard norms.

When the final product is prepared, its clinical trials are conducted. But the individualistic approach of Ayurveda towards every patient is often compromised in this process.

- Government has laid down some rules and regulations for the manufacturing and marketing of medicines and their patency which come under the Good Manufacturing Practises (GMP). Similarly, the practitioners should follow Good Clinical Practises (GCP).

Some herbal, animal and metallic originated drugs are banned by government due to their probable toxic effects to the human being. By proper purification, these can be proven beneficial to mankind. But due to lack of criteria for usage of such drugs we are unable to use them.

Keeping in view all the above considerations, some possible changes can be suggested here.

- First of all, a proper methodology should be developed at the institute level for teaching Ayurveda. For this, all the available literature can be studied and accordingly subjects along with latest additions or changes made by research in concerned topics should also be taught in the colleges.
- Government has all the power of administration and regulation over Ayurveda colleges, post graduate institutes, research centres, pharmaceutical companies, practitioners and all the systems which by one or the other way are related to Ayurveda. So, government should form a better inter-relation between all these levels.
- Government should make possible modifications in the rules and regulations related to the education of Ayurveda, cultivation of drugs, manufacturing of medicines and equipments, marketing and patency of drugs, their distribution in and out of India, research works and practise of Ayurveda. Then only the system can be strengthened.

If all these levels work together for single cause, the work will definitely become worthy. The areas of Ayurveda which are still in dark and which can be developed by conducting research over it can be selected and allotted to the PG institutes. This will make the PG scholars work for new ideas and also the purpose of developing Ayurveda will be served. The practical problem comes for the financial and legal aspects of every study. If government pays more attention towards this and make favourable arrangements to help scholars, the problems may be solved.

- At the level of pharmacies also, whatever researches are carried out, those can be

conducted through PG institutes and in the same way, the researches which are being conducted at institutes can be tied up with pharmaceutical companies which may solve the problems of both sides.

Eg. Clinical trials of new medicines launched by pharmacies or concerned surveys can be done by PG scholars and in turn the medicines which are required in large scale for thesis study can be prepared by the pharmacies. By such coordination, a similarity and regularity can be maintained instead of conducting large number of research works on small scales throughout India.

- Information regarding every project related to Ayurveda being carried out by government anywhere in India, its success or failure, its applicability should be conveyed and discussed at each level throughout the nation by conducting seminars, group discussions, CME's, ROTP's so that suggestions for its improvement and minimum precautions to be taken can be drawn.
- There should be a standard protocol for Ayurvedic research work which is uniquely accepted all over India and the same should be implemented at every level whether it is a research institute or a private practitioner. This can be useful in documentation of cases and presentation of such useful data in seminars.
- An important issue is to develop our own parameters for the study topics. Considering opinions of experts of Ayurveda and also other people related to Ayurveda, some standard parameters should be derived for any conceptual or clinical study. Wherever necessary, modern parameters can be made of use without disobeying our own shastra.

Government has already put forward many steps in this regard. It is intensely working through centralised bodies like CCRAS for the standardisation of Ayurveda in different aspects. It has published Ayurvedic Pharmacopoea of India (API) and Ayurvedic Formulary of India (AFI) which consists of standardised single herbs and

compound preparations from 52 different texts of Ayurveda. This is really an appreciable work.

If we all work in such a coordinated and well organised way with no bias and giving best of us then the time is not so far when Ayurveda will be accepted as a standard medical system and flourished in India and also worldwide.

References:

1. Charaksamhita, chakrapani teeka, chaukhambha publication
2. Biostatistics by Dr B K Mahajan
3. Research Methodology by Dr Subhash Ranade.
4. Sanshodhan Paddhati, Prashant Publication by Dr V B Patil
5. Salient Features of Ayurveda, By Dr S D Jalukar.

