Dr. Rajesh Kotecha Secretary AYUSH Government of India is making all round efforts to bring Ayurveda in forefront in playing its role in the domain of health care of the people of our country as well to define the role of Ayurveda to solve the major health problem of the World. Cancer is one of the major health problems all over the globe and the effort of the Department infining its solution through Ayurveda is commendable. At present Ayurveda experts at individual and institute levels are trying to find out its effective remedy from Ayurveda materiamedica, but present status of cancer care in Ayurveda institutes is that there is no sufficient infrastructure for the diagnosis of cancer patients particularly at its first stage. Hence the cancer cases diagnosed by the allopathy hospitals come to Ayurveda generally in third stage and/or when there is no further hope of relief by allopathy medicine. At some places Ayurveda institutions have memo of understanding with some allopathy cancer hospitals/institutes where its efficacy is being tested but due to the trial of Ayurveda drugs generally in third stage, the outcome naturally may not be encouraging. Therefore, it seems that AYUSH Department of Government of India is actively considering the other alternatives.

From the recent activities of the Department it seems that efforts are being made to rope up the prestigious Institute of USA to conduct research on Ayurveda anticancer drugs. For this purpose, India-United States Advanced Radiotherapy Consortium (IUS-ARC) has initiated Ayurveda Developmental Therapeutics Program (ADTP) as its part. Shri Anil Srivastava, President, Open Health Services Laboratory (OHSL) is coordinating the Consortium (IUS-ARC).

Recently a symposium in this regard was held at New Delhi under the chairmanship of Dr. Rajesh Kotecha. In this two-day symposia Dr. Jeff Bucshbaum, program Director Radiation Research Program, Division of Cancer treatment & diagnosis, National Cancer Institute (NCI), National Institute of Health (NIH), US Department of Health & Human service participated and proposed detailed protocol for the development of Ayurveda drug for the cancer treatment.

From India side, many modern experts of cancer radiotherapy were invited and they actively participated in the discussion of each point of the proposed protocol. In addition, about two dozen Ayurveda experts working on anticancer Ayurveda drugs in the country also participated in the symposia and narrated their experiences and achievements. The detail protocol for research in Ayurveda anticancer drugs was approved and hoping theething problems of execution part will be solved and well appreciated program will be initiated shortly.

In this regard consideration of few points may be relevant. Firstly, Ayurveda materiamedica clearly divided mainly into hericals, minerals and herbo-minerals. Ayurveda itself says that herbal drugs are of MriduVritya (mild in action), minerals and herbo-mineral drugs are outset rejected by the modern medical society by tagging it as heavy motels and toxic and not allowed to use. In Ayurveda the dose is not fixed but it varies according to the strength and digestive power (Agni) of the patient and virulence of the disease. As cancer is very powerful disease, therefore the dose of the herbal drugs selected for clinical trials should accordingly be high but within tolerable limit of the patient.

Ayurveda believes that all the substances of this world can judiciously be used as drugs and during the centuries of its journey it has evolved the methods of changing the poisonous, toxic and other such substances into their un-harmful forms so that they can be used as drugs. For this purpose, two complex processes viz. Shodhana and Marana are evolved which are specific for each and every such substance. Shodhana means purification and it involves the treatment of the substance with required specific herbs, liquids etc. so that its impurities, mixed harmful substance etc. are removed and poisonous nature of the substance is made ready to convert to the un-harmful/beneficial form by the next processes of Marana.

The next Marana process is mainly related to convert a metal/mineral substance into un-harmful and assimilative form as well as to remove any toxicity even if present after Shodhana. It involves treating with required herbs and liquids and anaerobic incineration and the finish product such availed is known as Bhasma which is a mixture of very fine and nano particles of the substance. As it is in absorbable form so it can also be excreted through the body excreta. Ayurveda itself is very careful in using the Bhasma and advises that only genuinely/properly prepared Bhasma should be used. There are strict tests for determining the genuineness of the Bhasma and side effects of improper prepared Bhasma are documented and their treatment is also mentioned.

It is obvious from the foregoing that Ayurveda takes all the care for the safety of Bhasma of mineral/metal drugs which are used safely by Ayurveda physicians for centuries. However, if the hypothetical views of allopathy regarding the so-called heavy metal toxicity of Ayurveda Bhasmae accepted, even then they may be meager in comparison to modern chemotherapy and radiotherapy being practiced now the days for the treatment of cancer.

Further Ayurveda has a unique concept of purification/detoxification of the human body by five therapeutic measures collectively known as Pancha-Karma. For this purpose Basti (medicated enema) or mild Virechan (purification) during the treatment with chemo or radiotherapy at some intervals depending the condition and strength of the patients may be employed for removing...
toxins/heavy metals from the body. Therefore, Ayurveda Bhasma should not be left out from the preview of utilisations as anticancer drug, if claimed through some studies or textual evidences.

To begin with and save the time it may be advisable that the promising Ayurveda anticancer drugs may first be screened on animals for their efficacy as well as side effects if any and only then potentially effective and safe drugs may be taken for the clinical trials.

Initially in the clinical trials those drugs may be used as adjuvant to modern therapies with aim to reduce the side effect of the modern therapies, reduce their dose or to increase their safety levels etc. Thereafter the supposed effective drugs may be taken for clinical trials as independent anticancer drug.

Most of the recent studies in Ayurveda Institutions are directed toward the quality of life of the cancer patients with very encouraging results; therefore, further efforts in this direction may also be appreciated as this point is also very important for the last days of the cancer patients.

Another promising area to startwith is blood cancers, because many Ayurveda experts claim for successfully treating it and some have taken/applied for the patent too.

In clinical trials many issues are raised and ethics one of them. Some of the modern experts even point out that they will not allow the use of cancer patients as human guinea pigs for the clinical trials of Ayurveda anticancer drugs in their institutes when modern treatment is available. Without going to the question of how much safe and effective modern therapies are available, it may be suggested that as mentioned earlier, wherever facilities are available for animal experimentation or by collaborating with the research laboratories, initially experimental studies may be done for the so called toxic/side effects as well as the efficiency of the Ayurveda drugs under question to alleviate the point of ethics and safety and effectiveness and thus found the suitable, only those may be taken for clinical studies.

Other area is use of Ayurveda drugs as adjuvant for protection of vital organs and/or reducing side effects of chemotherapy and radiation therapy.

Reduction of effective dose (ED) or increasing the range between ED_{50} and LD_{3/8} of the modern drugs/therapy by using Ayurveda drugs as adjuvant is another important area for research.

In the recent scientific studies immunity modulation effects of Rasayana drugs are reported, which may also be considered. Ayurveda gives very importance to physical, mental and disease fighting strength as well as power of digestion of a patient in fighting out of a disease. To increase the fighting power of the tissues involved, the concept of NaimittikaRasayana is there. For all these points specific drugs are available in Ayurveda materia medica, the consideration of which may enhance the possibility of cure in various aspects of cancer treatment.

As mentioned above detoxification measures of Ayurveda particularly VirechanaKarma (purification therapy) and BastiKarma (medicated enema therapy) may be employed for removing the toxins of the body and NasyaKarma (medicated errhine therapy) to remove the toxins particularly of the patients of brain cancers.

Point of ego clash was also raised by some of the experts in the symposia. This point is important because reason for the failure of most of the collaborative research programs in our country since independent was ego clash between the Ayurveda and Modern doctors. In this regard the main point of consideration should be of alleviation of human suffering instead which ‘pathy’ is superior or which doctor is superior.

In a team, every member has its defined role and that should be played instead of looking towards the point of superior or otherwise. Therefore, in such research projects involvement of dedicated research workers should be considered at least at top/management level.

Following are the few modules for research on Ayurveda anticancer drugs:

1. Ayurveda diagnosis and Ayurveda treatment maintained by Ayurveda doctors. In such study diagnosis is not confirmed as ‘cancer’ so the outcome may not be acceptable.
2. Diagnosed by Modern cancer centers and Ayurveda treatment in Ayurveda hospitals and doctors. These types of researches are already in existence at individual levels in some Ayurveda Institutes and also by some private practitioners with no concrete outcome acceptable to the scientists.
3. Modern diagnosis and Ayurveda drug trial carried out in modern hospital and outcome also assessed by modern doctors. At present this module is in existence in the modern cancer centers where Ayurveda institutes have MOU, which is not so success.

It is a completely failure modules adopted at many places such as Jamnagar, CDRS scheme of ICMR. Ego clashes lead to day to day problems instead of team work.

The best way is to establish a cancer Laboratory/center in the existence Ayurveda establishment such as CCRAS where full modern facilities may be made available for the cancer diagnosis.

Ayurveda principle may be utilized for searching the appropriate Ayurveda anticancer drug/formulation.

Hoping initiation done by AYUSH Department/Ministry of Government of India as mentioned above will be executed by examining pros and cons of the earlier experiences in conducting such valuable project where internationally famed authorities have shown to examine the role of Ayurveda anticancer drugs in management of cancer.

It is suggested that while dealing with cancer, benefit for the human suffering should be fore-point instead of ego clash of pathyor doctors. Best of both the medical systems should be used to alleviate the human sufferings from this dreaded disease.

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