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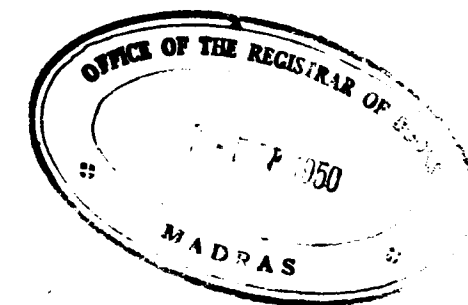
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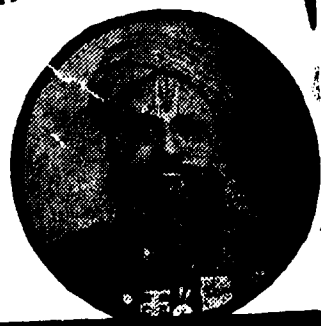
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THE EDITORIAL OF JOURNAL OF INDIAN MEDICAL ASSOCIATION
ON THE REPORT OF
THE CHOPRA COMMITTEE - A REJOINDER

We must first record our strong and emphatic protest against the most unfair and unscientific criticism of the distinguished chairman of the Chopra Committee occurring in your Editorial as well as in a special article which seems to have your warm Editorial approval and is published in the same issue in which your Editorial appears. Says your contributor, "The Chopra Committee after visiting the School of Indian Medicine at Madras, seems to have surrendered to the glamour of the School and thereafter ceased to function as a committee, the Chairman feeling helpless and abdicating his position and leaving everything in the hands of the clique of the L. I. M. Association." Your Editorial embellishment, which is almost defamatory in its nature, runs as follows: "Col. Chopra had himself said in his Indigenous Drugs of India (1933): 'After imparting instructions to the Ayurvedic Students in modern Physiology, Bacteriology, Pathology etc., to ask them to apply the doctrine of Vayu, Pitta and Kafa etc. to explain the causation of disease cannot possibly be convincing to them and can bring nothing but chaos and discord to their minds. Students trained under such a system can neither be good at one nor the other.' It is strange and inexplicable that Col. Chopra has played a complete somersault with his own views and has now recommended the very opposite. It is not unlikely as Dr. Srinivasacharya has suggested that he may have been influenced and overridden, this time, by considerations other than that of his own

expert scientific knowledge." (Italics ours) In other words, the insinuation of your contributor and your editorial is that Col. Chopra who has to his credit a long and distinguished record of first rate Medical research (including research in drugs of Indigenous Medicine) equalled by very few in this country and excelled by none, suddenly ceased to be a scientist and to apply "his own expert scientific knowledge" in regard to Chopra Committee Report. What is the basis for your insinuation? It is that in 1948 he expressed certain views which were different from the views he expressed in 1933. Is not the whole history of modern science replete with instances where distinguished scientists who held certain views at one time gave up those views later on, in the light of new facts observed subsequently and gave expression to views totally different? Has there been a greater and more revolutionary change in views of our most distinguished and top-ranking scientists than the rejection of their long-cherished views of the uncuttable nature of "Atom", (wrongly so named because it was then thought to be uncuttable) and the acceptance of the present view that the "Atom" is very much cuttable, though the use of "Atom" as a misleading misnomer in the light of the present-day knowledge is still retained? Almost everyday, we come across instances of great scientists whose utter loyalty to truth has made them give up their earlier views in the light of fuller knowledge and proclaim and propagate new and different views. As has been

observed by Alexis Carrel in his epoch-making work, "Man, the Unknown", "Great Scientists always have profound intellectual honesty. They follow reality wherever led by it. They never seek to substitute their own desires for facts or to hide these facts when they become troublesome". To continue to hold, for the sake of consistency, earlier views when facts known later demand a change is characteristic of a person of assinine or mulish nature. As a true and distinguished scientist loyal to truth at all costs, Col. Chopra had no hesitation in giving up his earlier view and openly express a different view demanded by later facts and observations. Col. Chopra of 1933 is apparently your final and accepted authority because he said then what is now agreeable to your thinking. Col. Chopra of 1948 has fallen from your grace because he has dared to differ from your present view and his own earlier view, after careful examination of facts subsequently observed by him. In carrying on a controversy or discussion on a scientific topic, it is most unfair and unscientific to proceed to gain a victory over the scientist with whose views you disagree by seeking to finish him off by stating that he has now ceased to think and act as a scientist but allowed himself to be influenced "by considerations other than that of his own expert scientific knowledge". This is exactly what you have now done in your Editorial. There is no sense or science in such an attitude. We have written at some length on this question because of the further nonsense contained in the mischievous insinuation that it is the "clique" of the L. I. Ms. of the Govt. of School of Indian Medicine at Madras that has acted as the villain of the piece in making the Expert Committee who visited that school surrender to the glamour of the institution and cease to function as a

committee, "the chairman feeling helpless and abdicating his position and leaving everything in the hands of the clique". We were not aware that our clique was so wonderful and powerful as to cast an irresistible glamour over even the distinguished experts of the committee and make so eminent a Scientist as Col. Chopra feel helpless and abdicate his position as Chairman and leave everything in the hands of our clique; but we must decline to accept the unintended compliment implied in such a statement because it is utterly untrue and most unbecoming of your "clique" to make and our "clique" to accept (with apologies to you for repeating your choice word "clique" in this context). It is quite true that two of our L. I. Ms. had the very great privilege and honour of working for a few months under the direction of Col. Chopra and benefitting in their own humble measure by the scientific atmosphere that surrounds that superbly scientific and sensitive mind; but this was no hole and corner affair carried on behind the scene as suggested by another mischievous insinuation of yours. The committee have openly and explicitly stated in their report itself the exact and humble role played by our L. I. M. workers and complemented them more generously, as our workers think, than was due to their work. Such generosity is, of course, the characteristic of great ones and loving Gurus everywhere and at all times. As for the allegation that the L. I. M. clique quoted in April 1949, certain extracts from the Report before it was published, both you and your contributor seem to be ignorant of the fact that extracts from the Report were released by Govt. of India as early as 20th February 1949.

We beg of you to read once again the following mean stuff which you have

chosen to print in regard to the work of Col. Chopra—a life-long and most conscientious worker in the cause of science and promotion of scientific research: "What is more probable is that he (Col. Chopra) had nothing to do with the drafting of the Report (the report of the Col. Chopra Committee) which was entirely left in the hands of the clique working behind the committee." It is most mean and unfair, if not also defamatory, to suggest that Col. Chopra descended to the low level of giving his name to the report which was not his. Call us the L. I. Ms. by any name you like but do not demean yourself, we pray you, in the way you have done, by casting aspersions against the integrity and good conscience of Col. Chopra whose long and distinguished scientific record has been characterised at all times by loyalty to truth at all costs and as he himself sees it. It may be that he himself has not noticed your insinuation or will not answer it even if comes to his notice. Nevertheless, we beg to suggest to you that the least you can do now to make amends for what you have done is to offer to him handsomely your most sincere apologies. To err is human; but to persist in the error is not human but assinine.

The worth of L. I. Ms. inferable from certain of your references to them.

We have already stated that we ourselves did not know we were such wonderful people with extraordinary powers, attributed by you to us namely the power to hypnotise or cast a glamour over the minds of the experts of the Chopra Committee and make them (including the Chairman) abdicate their function of independent thinking and follow us meekly in thinking as we think and proclaiming with us that the

curriculum adopted in the Govt. School of Indian Medicine is the model that is a fit and proper one to be followed all over India. By the same token and parity of reasoning, we must be credited with having cast our wondrous power and influence over the academical authorities of many great institutions all over India where the curriculum adopted is similar to ours namely the Ayurvedic College of the Benares Hindu University, the Unani College of the Aligarh Muslim University and other similar institutions recognised by the U. P. Board of Indian Medicine and the U. P. Government; the Ayurvedic College at Bombay and elsewhere working under the curriculum approved by the Board of Indian Medicine, Bombay and the Govt. of Bombay; the Ayurvedic and Unani College of Mysore; the Ayurvedic College of the Travancore Government; the Ayurvedic and Unani Tibbi College at Delhi, founded and maintained for years by the combined labours of savants of all-India reknown like the late Hakim Ajmal Khan and Dr. Ansari and many other institutions all over India including the Andhra University where the degree of Bachelor of Ayurvedic Medicine has just been instituted with a curriculum of studies similar to that followed in the Govt. School and College of Indian Medicine Madras and whose reknowned Vice-Chancellor Dr. C. R. Reddy gave evidence before the Chopra Committee in support of the curriculum as may be seen in the printed evidence published by the Chopra Committee. As we said before, we cannot credit ourselves with the possession of all those wonderful powers, your argument may lead one to credit us with. If any inference could be drawn from your unintended complement to us (the Alumni of the Government School of Indian Medicine at Madras) it is that the result of the Madras Experiment and scheme of

teaching followed at the Govt. School of Indian Medicine of Madras has been a phenomenal success.

The Phenomenal Success of the Madras Experiment.

But to admit the great success of the Madras experiment inferable from your own statement at certain places of your Editorial is fatal to your disapproval of the scheme of studies and training adopted at the Govt. School of Indian Medicine. So you had to say in another place that "the result of the Madras experiment is a complete failure". We understand your predicament that unless such an assertion is made, your case has no legs to stand upon and falls flat to the ground. Nevertheless, the fact remains that such an assertion by you and others of your way of thinking is a pure fiction of the imagination and wishful thinking and a demonstrable and despicable lie or a "terminological inexactitude", if it is considered that the use of the word "lie" is unparliamentary. As against such fiction or wishful thinking, we will give the following facts relating to the phenomenal success of the Madras experiment based on demonstrable facts and records.

Your Fiction and our Facts.

One of the main recommendations of the Committee on the Indigenous systems of Medicine appointed by the Govt. of Madras was to the following effect:—"We consider that the most urgent and immediate concern for the state is to establish and promote by state-aid, state-recognition and such other means, the establishment of suitable centres of medical education, and the devising of suitable schemes of

studies of Indian Medicine calculated to make those trained under it equal to the task of ministering, not only to our medical needs, as at present, but to our surgical ailments as well. Every scheme of study of Indian Medicine whether Ayurvedic, Siddha or Unani, should make adequate provision, not only for the efficient training in subject appropriate to itself, but also for the training of the essentials of whatever is valuable in Western Medicine.

"Consistently with this view we would like to see the future practitioners of India, no-matter what denomination they belong to, Ayurveda, Siddha, Unani, European Medicine or any other being so schooled and trained, as to be able to bring to bear on the problem of health and ill-health, not only the expert knowledge of their systems, but, as far as practicable, the best that is in other systems also".

It is to implement the above recommendations of the Madras Committee that the Government School of Indian Medicine at Madras was founded, and began functioning on 6th January 1925, with a scheme of studies so devised as to achieve the purpose the committee had in view, and "provide such training to its alumni as will enable them to become competent practitioners of Indian systems of Medicine with a good working knowledge of the Western system also".

Since then, many hundred of Licentiatees (L. I. Ms.) have graduated from the School and settled down for practice, mostly in rural areas or as Medical officers in institutions under Government or Local Bodies or as Rural Medical Practitioners of subsidised dispensaries, in posts previously open only to M.B's, L. M. Ps, and other qualified Allopathic

Practitioners. Notwithstanding the discouraging and step-motherly attitude accorded to them by Government in regard to their status, salaries, prospects and opportunities in public service, they have acquitted themselves in a manner that does great credit to them, ministering Medical Relief to the vast masses that yearn for Indian Medicine as well as for the smaller percentage that want or need the ministrations of Western Medicine. Some years ago, a few batches of the L. I. Ms. underwent training in Public Health work along with L. M. Ps. and other Allopathic practitioners, passed the qualifying tests and carried on Public Health work in addition to their duties relating to Medical Relief. These and other L. I. Ms. have gone to out-of-way places and jungle tracts giving anticholera and other preventive inoculations and generally carrying on preventive and epidemic duties whenever called upon to do so.

The records of their work both in the Medical and Surgical lines are found in the annual reports and statistical statements published by the Government. Their work in all these directions has stood the tests of periodical inspections by allopathic district medical officers or their assistants, some of whom have openly expressed their antipathy for what L. I. Ms. stand for, while the generality have no special sympathy for them. Judged by the records of even such official inspections by unsympathetic Inspectors, the Madras Scheme has been a phenomenal success, as far as it has gone; and is well worthy of study by persons entrusted with the duty of planning the future of Medical and Public Health work for India more especially because the success achieved has been obtained under the distressingly grudging and step-motherly treatment it has suffered from, at every step

of its progress, a treatment to which an Editorial in the Hindu of Madras referred in the following terms as long ago as 1944: "This step-motherly attitude towards the Indian systems is very largely due to the fact that the directions of the Government's medical policy has largely been in the hands of medical men trained in western systems who believe, not the less energetically for their inability to advance any proof in support of their conviction, that the Indian systems are "unscientific." Dr. G. Srinivasamurti in a speech the other day, vigorously exposed the prejudices and fallacies underlying this attitude. His charge that the most vociferous denunciations of Indian Medicine come from those who neither know nor care to acquaint themselves with the elements of its theoretical basis or practical achievement would be difficult to refute."

It is only during the last two years of our really free and Independent regime that the extent of step-motherly attitude exhibited towards us and our Alma Mater by previous governments—specially during the Adviser's regime is showing evidence of diminution though we still suffer from many handicaps of previous regimes. Nevertheless the great success of the Madras experiment and the general appreciation by the Public of the successful and efficient work of L. I. Ms. have been such as to result in the recent raising of the status of our School into that of a College and the demand during the last few years for the services of L. I. Ms. being greater than the available supply. At the present time, over 600 institutions of Government and Local Bodies all over the Presidency are manned by L. I. M. which would have been manned in the pre-L. I. M. days by M.B's and other allopathic practitioners only, and there still remain vacancies

advertised for L. I. Ms, which remain unfilled for lack of Alumni of our School. The story of private practice by L.I.Ms has also been one of growing popularity and success. Judged by the success already achieved, the prospect of greater and more resounding success, hereafter, is also assured as the step-motherly treatment still accorded to us will go on getting less and less.

It is the very success of the L. I. Ms. (which you and your contributor want to question) and their capacity to compete with Allopathic practitioners on equal terms and in both the Medical and surgical lines (exactly as the scheme of the Madras experiment was designed to achieve) that has roused the anger of many Allopathic practitioners and led to their newly developed love for those practitioners of pre-L. I. M. days, whose practice had been narrowed down under our British rulers from the Ashtanga Chikitsa (practice along both medical and surgical lines) of the great days of the past to the Ekanga practice in certain restricted field of Medicine only leaving all other fields of practice to the Allopathists without the competition of L. I. M. practitioners. Hence, the profession by many present day Allopathists of patronising care of non-L. I. M. practitioners of Indian Medicine whom they did not care to look at, much less patronise in the non-L. I. M. days and the shedding of copious crocodile tears in their cause coupled with vigorous campaign for stabilising Ayurveda in its state of arrested progress and stagnation in the practice of certain limited fields of Ekanga Chikitsa only and preventing it from becoming progressive and up-to-date in the all-round practice of Ashtanga Chikitsa. Hence also the campaign against the L. I. Ms., their Alma Mater and the synthesis or integration of Indian and Western Medicine which they stand for.

Synthesis : the I. M. A. (Indian Medical Association) scheme versus Chopra Committee's — Dangers of I. M. A. scheme.

It is not that the I. M. A. does not realise that some kind of synthesis or integration is necessary and inevitable. The Chopra Committee's argument for the necessity of synthesis remains unanswered and unanswerable as also the vividly realistic picture they have drawn of the future, if first steps towards ultimate synthesis (which they frankly admit may take many years to be completed) are not planned and implemented at once. Thus, they observe, "It is clear that both the Western and Indian systems have much to give each other, and that keeping them exclusively in water-tight compartments will be detrimental to the growth of medicine and to humanity. It needs no stressing that mankind has a right to all that is best in the sciences of health and healing.....Utmost efforts should therefore be made to put together the best in both the systems, and to evolve one unified system for the advancement of Medicine and the benefit of Mankind.....It is also worth considering what the alternative to a synthesised system may mean. There will be a number of systems working side by side in unpleasant rivalry and unhealthy competition. There will also be an insistent clamouring by each system for preference by the State in the form of financial help. Each will want its own colleges, Hospitals, Clinics and Dispensaries in preference to those of the others. Moreover, the population of each town and village will be putting up demands for the establishment of Hospitals and dispensaries favoured variously by them. If these demands are met, it would mean a colossal expenditure. If they are refused then there will be an awful clamour".

As we have stated above, it is not that the I. M. A. is not aware of the necessity of synthesis or integration; but, its scheme of synthesis is the reverse of that envisaged by the Chopra Committee whose programme is for incorporating into Indian Medicine whatever is of proven value in Western Medicine. According to I. M. A. "the process should be reversed that is whatever in Ayurveda stands the test of scientific scrutiny should be absorbed and synthesised into Modern scientific medicine". To superficial observers, the difference between the incorporation of B into A under the title "Indian Medicine" and the incorporation of A into B under the title of "Modern Medicine" may appear as distinction without difference or difference only in nomenclature, as both A and B are present in both. Further observation would show that the distinction is very real and vital. The scheme of the Chopra Committee would preserve that unique characteristic of Indian Culture throughout the ages which has enabled it to go on assimilating the valuable and significant features of other cultures, while it has remained all the time fundamentally rooted in its own cultural excellences. It would build up on those most valuable and fundamental basis of Panchabhuta, Thridosha and other theories which are basic and vital to Indian Medicine for purposes of diagnosis of disease and patient, maintenance and promotion of positive health in those who are well

and providing relief to those who are ill. Under the I. M. A. Scheme, "If any branch of Ayurvedic Medicine is sought to be reformed in the light of modern knowledge, apparently enough, it will become the corresponding branch of Modern Medicine. Therefore, the process should be reversed etc." The course of training according to the I.M.A scheme would virtually be on the basis of only Modern Medicine till such time (if such time would come at all if the I. M. A. dispensation continues as at present) as the future findings of Modern medicine would be such as to allow for any teachings of our ancient wisdom to be taken into the "corresponding branch of Modern Medicine". Till then the most valuable and foundational principles which are basic and fundamental to Ayurveda and which have been found to work successfully in practice throughout the ages, will find no place in the I. M. A. scheme of synthesis. Such a scheme is bound to do great violence and incalculable harm to those most precious features and foundational principles of Ayurveda which have enabled it to continue to demonstrate to all who have eyes to see that its practical and survival value is decidedly high, as may be witnessed from the fact that it is Indian Medicine that has ministered for Millennia to the vast masses of our population and that, even in recent times and notwithstanding the very adverse conditions to which it has been sub-

jected to under Allopathist-led foreign regimes for over a century and a half, it is Indian Medicine that has ministered and is still ministering to about 80 to 90 of our teeming millions, especially in rural areas, whose faith, affection and preferences are rooted, in Indian Medicine while it only 10 to 20 percent of our population mostly in urban areas that are served by the very much pampered and privileged western medicine. Furthermore, it is to be noted that the ministrations of Indian Medicine are sought for not only by the vast masses of our unlettered poor but also by well-placed persons of light and learning in all walks of life including rich intellectuals who could well afford to obtain the service of western Medicine if and when they want it as also by some practitioners of western medicine itself in the treatment of some of their patients and

the members of their family, including themselves. Under these circumstances, to implement the scheme of synthesis adumbrated by the Indian Medical Association would be to cause great disservice to the Public and to inflict, as we have mentioned already, great violence and incalculable harm to our precious cultural heritage in the department of medical science. We cannot believe that our own National and Popular Government will countenance the implementation of such a disastrous step. We also hope and pray that they will implement the unanimous recommendations of the Chopra Committee for ensuring for Indian Medicine a progressive future of all-round excellence and Ashtanga practice (i.e. practice in both Medical and surgical lines—worthy in every way of the glorious days of its palmy and progressive past and even surpassing it as years roll on.

"The Science and The Art of Indian Medicine"

By

VAIDYARATNA CAPTAIN G. SRINIVASA MURTHI, B.A., B.L., M.B., & C.M.
(Continued from Vol. III No. 1)

If by some means, we can but shake up the arrangement of the proton-electron bricks of the brick-blocks of the base metal like lead into the proton-electron arrangement constituting the brick-blocks of a noble metal like gold, then verily, we have achieved alchemy which, by the way, has now become quite scientific and respected; several stars of the first magnitude in our scientific galaxy are now hard at work in achieving the transmutation of elements and some brilliant results have been reported already, although they cannot, as yet, be reckoned as successful business propositions; but tomorrow, even that may come to fruition and if it does, it is some consolation to know that we are not now likely to denounce the successful wizard in this line as an infamous charlatan and cheat. We are more likely to go tumbling over one another to hail him as the greatest F. R. S. of the day.

Now, let us turn for a moment to Hindu notions on this subject. What do we find here? Ideas strikingly modern meet us from the very dawn of the history of Hindu Scientific thought: the Paramanu, which may be said to correspond to the atom of our western chemists has ever been looked upon here as complex in structure, and never as a simple indivisible entity; the modern conception of an atom as being a complex-proton-electron system finds its parallel in Hindu Scientific thought from

its very commencement, appearing all at once in its full-fledged modernness without passing, as in the West, through the stage of positing a simple and uncuttable atom. We may then look upon the Paramanu as corresponding to the atom of our modern western chemists, or to the brick-blocks of our analogy, but with a difference which may be explained thus. Modern science teaches that though we have some ninety different chemical elements, yet, the Atomic brick-blocks of all these are everywhere built of the same two kinds of bricks, viz., the protons and the electrons; according to the Hindu view also, every Paramanu brick-block is considered to be built of two kinds of bricks, viz., the central bricks of one kind of Tanmatras (i.e., Proto-matters charged with specific energy of one kind, and corresponding to the modern scientists' Protons charged with positive electricity) and the peripheral bricks of another kind of Tanmatras (i.e., Proto-matters charged with specific energy of another kind, and corresponding to the modern scientists' electrons charged with negative electricity). So far, both views seem to agree at this point, however, the Hindus have gone a step further; they consider that, corresponding to each of the five Mahabhutas (i.e., Prithvi and other "states of matter") there is a specific type, as it were, of proton-electron bricks; in other words, these are not one but five types of proton-electron bricks, corresponding to the

five "states of matter" (*i.e.*, to the five Mahabhutas, Prithvi and the rest). As regards the exact nature of these five types of bricks, there have been some differences of opinion among different schools of thought. Ayurvedic authorities like Charaka and Sushruta follow mostly the Sankhya view, and sometimes the Vedantic: I shall therefore make brief mention here of both these views.

The Genesis of Atoms—The Vedantic View.

According to Vedantic Scientists, each of the five gross Bhutas (Mahabhutas) are derived from five corresponding subtle Bhutas (Sukshma Bhutas); these may be taken to correspond to the five Tanmatras of the Sankhyas which are, as I have stated above, proto-matters charged with energies of various kinds—the proton-electron bricks if we may say so, that go to build up the Paramanus (the atomic brick-blocks) of the five gross Bhutas; the Vedantins hold that into the structure of the atom of every gross Bhuta all the five subtle Bhutas enter in certain definite proportions. In the evolution of the atom of any particular gross Bhuta, say, Mahabhuta Prithvi, the corresponding subtle Bhuta (in this case, Sukshma Bhuta Prithvi) acts as the central radical (corresponding to the proton brick of Modern Science) while all the other four subtle Bhutas go to form the peripheral Electron-bricks of our Paramanu brick-block; the process of transformation of a gross Bhuta from the subtle Bhutas is technically known as Panchikarana (quintuplication) which is illustrated thus: "The Mahabhuta Earth-gross Earth-matter, is composed of four parts of subtle Earth-matter and one part each of the other forms of subtle matter. The Mahabhuta Vayu is composed of

four parts of subtle gaseous matter and one part each of the other forms of subtle matter. And similarly with other Mahabhutas.

Hence if ak, v, t, ap, p, represent five forms of subtle matter (Akasha, Vayu, Tejas, Ap and Prithvi), and AK, V, T, AP, P, stand for the corresponding Mahabhutas as follows:

As to the origin of these subtle Bhutas themselves, the Vedantic Scientists hold that each is derived from one which is higher in the scale; thus, subtle Ap, which comes from subtle Tejas which comes from subtle Vayu, which again comes from subtle Akasha; and all these energies of various kinds. From the above formula of evolution it will be seen that, according to the Vedantic Scientists, the contents of the central radical is equal to the contents of all the peripheral units put together—a view that brings at once to our mind the notion of the Modern Scientist that the charge on the central proton is equal, though opposite, to the charges on all the peripheral electrons put together; but, there is this fact to be noticed, viz., that the peripheral electrons would, in this view, be not of one kind but of four different kinds; it would be very interesting to know if this view finds any support from Modern Science. In any case, it is the central radical that is held to be the characteristic part. This is similar to the modern view that the nucleus is the characteristic part of an atom and that if you alter it, you get a new atom or perhaps two as in certain cases of an "atom splitting".

The Genesis of the Atoms—the Sankhya View.

According to Sankhya Scientists, the five kinds of Bhuta Paramanus (Atom brick-blocks) are evolved from

the corresponding Tanmatras by the process known technically as Samsrishta Viveka (Differentiation within the integrated); the building up of each kind of Bhuta Paramanu requires two kinds of Tanmatras (Proto-matter charged with energy)—one kind of Tanmatra acting as the central radical, while another kind constitutes the periphery as indicated in the following table:

Genesis of Atoms—Comparison with Modern Western View.

It is sometimes objected that, in the theories of Evolution of Atoms adumbrated above, there is a certain mixing up of "energy" and "matter"; that is quite true, but it cannot be helped; Modern western science itself is now led to more or less the same position. When we are in the region of the practically weightless Electrons, we cannot help speaking of them, in terms of energy, that is, as charges of negative electricity, just as the Hindus speak of their Tanmatras as being charges of specific kinds of energy. Nowadays, we talk of Electrical "Energy" being stored, bought and sold, just as if it were an article of merchandise like petrol. When we fight for concessions and monopolies for exploiting oil beds in Persia, Asia Minor and elsewhere, our greed is really not for matter but for energy; for every gallon of petrol means not merely a definite quantity of matter but also a tremendous amount of energy locked up in it. This energy is of various kinds; it is only a part of its chemical energy that Western Science has learnt to make use of for work in our power-houses, mills, factories, and the like; but, this is as small as the tiniest drop in the ocean when compared with the stupendous quantities—immensities upon immensities—of energy that remain locked up in its atoms. Fortunately for the world, Western Scientists have not yet been

able to release this energy; I say "fortunately" advisedly; for, when one reflects over the savagery and basest uses to which scientific knowledge was applied in the recent war, (this refers to the war of 1914-18) one shudders to think of the diabolical ghastliness that may result if people with the mentality of those responsible for the horrors of the last war come to possess the secret of releasing energies that may blow up continents as easily as they now do palaces and forts. (This was the position in 1922 when this Memorandum was first written. Now, the immensities of nuclear energy have been released through "atom-splitting" and the manufacture of the Atom-bombs and applies to terrible destructive uses as at Hiroshima). When we have proceeded thus far in our comparative study, a question irresistibly presents itself before our minds and it is this: is this "Atomic Energy" of Modern Western Scientists the same as the Tanmatric energy, which, as we have just seen in our discussion of the Hindu conception of the evolution of Atoms, plays so vital a part in the genesis of the Bhutaparamanu, corresponding to our chemical Atom? The resemblance is very close, but, I must resist the temptation to hazard a definite answer, as it really requires a much better knowledge of both systems than what I have been able to gather.

I may, however, mention here that I discussed the matter with a profound and encyclopaedic student of Modern Physics, my friend Professor Yadunadan Prasad, M.A. (Cantab.), B.S.U. (Lond.), who was very much interested to see the remarkable resemblances that do exist between the ancient Hindu, and the modern Western conceptions of the structure of the atom. He suggested to me that Tanmatric energy corresponded in all probability to the energy

locked up in the Proton-electron nucleus of the atom. and that, while the five types of Tanmatras or Pancha-Bhutas that the Hindus speak of has no definite counter-part in Modern Physics, an explanation for the distinction may perhaps be found in the "Quantum" theory of Modern Physicists—very interesting and valuable suggestion; for, the very word "Tanmatra" contains a definite suggestion of "Quantum" or measure (Matra); but then it is not enough for our purposes to have only one kind of quantum or "Photon" as it is called, which would enter our eyes, contact our retinas and enable us to "see" or become aware of the sensation of vision. We need four more or five in all to enable us to become aware of the intimations of all the five senses namely senses of hearing, touching, seeing, tasting and smelling; for the Ayurvedists hold that the type of Panchabhutic matter of each of our sense-organs determines the kind of sensation we become aware of when the mind attends to the report of the particular sense-organs concerned. We "see" an object by means of our eyes because of the presence therein of Panchabhutic matter of the type of Thejas (Luminant or Radiant Matter?) from which its predominant Tanmatra, viz., Rupa Tanmatra (bundle of Photons constituting Light?) move to enter our eyes and contact our retinas which report to our minds the presence of Light from the objects seen and we, the subjects, become aware of the objects seen. Similar is the case with our other senses so that, in this aspect, Jeans may be considered to be in the authentic line of ancient Ayurvedists when he writes in his book (*The New Background of Science*—1943 edition—p. 12) that "In general, we may say that we experience the outer world through small samples of it coming into contact with our sense-organs. The outer-world

consists of Matter and Energy; samples of this outer world consist of Molecules and Photons"; but, as I have said above, it is not enough for Ayurvedists to speak of only one kind of quantum namely Photon. We need, in addition, Akousticons, Tactons, Gustons, and Olfacton if these neologisms are permissible and suitable. If that day comes when advances in Modern Science would enable us to speak of these in terms similar to those we now speak of in regard to Photons, then, indeed, will have arrived the day when we can interpret in the language of Modern Science the teaching relating to this subject contained in an Aphorism of Charaka, the father of Ayurveda, (Vide Charaka-Sutrasthan-Chap. VIII) which summarises the teaching through correlations and correspondences shown below.

"It is certain that there are

Such are the fundamental chemico-physical notions of the Hindus with which we must be familiar if we are to understand Ayurveda aright. To my mind these show in certain points striking correspondences to the most recent teachings of Modern Western Science; in certain points the Hindus have gone even further in their speculations; will these conceptions also be justified by the future discoveries of Modern Science? It is rash to assert and difficult to deny; but, when one realizes how some of these theories have been justified by the most recent events in Modern Science, one cannot help entertaining the feeling that, as some theories have already proved true, the same may happen in the case of others as well. In this connection, it is also worth noting that the Hindu tradition about the origin of these theories refers to them as matters of direct observation and not of mere speculation. To understand how this comes about we have to realize that

the methods by which the Hindus sought to cognize things beyond the range of our senses differed in one vital respect from the methods of the West. In Modern Science, we seek to overcome the limitations of our senses by equipping ourselves with various external aids like the microscope, telescope, the spectroscope, the cardiograph and the like; the Hindus however preferred to effect the same results, not by providing their senses with external aids, but by improving their own internal organs of sense, so that their range of perception may be extended to any desired degree. The way of effecting this improvement was by exercising the senses and the Mind in certain ways indicated in the authoritative teachings and taught by the Guru to the Shishya when he was ready for it physically, morally and otherwise. It is claimed, for instance, that when they taught about the structure of the atom, they did not merely speculate in the matter but described things as they directly saw them. It is however recognised that, as evidence of Direct observation it is of value only to those great seers who could see things for themselves, and not for others; to these latter, it could be offered only as a good working hypothesis (or Kalpana), to which they are free to apply the various tests of a valid hypothesis before they accepted it. Herein lies the difficulty of the Hindu method; because, the perfecting of the senses to desired degree can be achieved by only those few in our generation who are willing to pay the price of physical, moral and other disciplines necessary for acquiring the Yoga Siddhis required for the purpose; and therefore the satisfaction of direct observation is not possible to the great majority of us. Herein lies the immense value of the external aids which Western Science provides us with; for, many of us can learn with comparative

ease how to use them in checking and verifying things for our-selves; and this is an advantage of very great value.

Presentation of Ancient Wisdom in the Language of Modern Science.

For a proper appreciation of the treasures of Ayurveda by the present generation of intellectuals in India and the world at large, it is necessary to present them, wherever possible, in the language of Modern Science. This may be illustrated by an example with reference to the great work of our distinguished countryman the late Jagadish Chandra Bose. With the aid of his marvellous instruments of great delicacy and precision he demonstrated to an astonished world that the response to stimuli of both the so-called living (e. g. plants) were so strikingly similar as to suggest One Common Life animating both Kingdoms of Nature; but he was never tired of proclaiming from the house-tops that what he demonstrated was nothing new but was only part of that ancient wisdom which our great forefathers taught many millennia ago on the banks of the Ganga. This is certainly true. Nevertheless, the fact that Bose demonstrated the truth of the ancient teaching by methods and through tools of modern Science did serve to carry conviction to minds of moderners in manner and to a degree that was not realised before even by Indians familiar with the teachings of our Ancient Wisdom. It made the ancient teaching live once again in our minds as living reality and be treasured as our precious and valued heritage—one of the many that diligent search and research by competent investigators of the present and the future may unveil in course of time. Such, for example, are Panchabhuta Theory of Matter, already considered, with its Matter-Mind Parallelism and correspondence, (the Pancha

Bhuta, the Pancha Tanmatra and Pancha Indriya relationship) which integrates in a wonderfully illuminating way our Physiology, and Biological Sciences into a comprehensive and fundamentally inseparable unity of origin and evolution; the evolution; the tridosha Physiology, Pathology and Therapeutics; the Sankhya-yoga Physiology—theoretical and applied; the Vedantic view of Prana (the Life-Principle); the Dravya-Guna-Virya-Vipika Pharmacology and Therapeutics; and the like. Each century and generation has had its own interests, outlooks and methods of expression of the same basic ideas and fundamental conceptions. There was a time in this country when Poetry was the medium of expression for all great ideas and teachings, even in the domain of the positive sciences. The means and symbology adopted for expressing the same fundamental ideas and basic truths have varied and will perhaps continue to vary from age to age and generation to generation. It may even happen that these may not to be expressed through the symbology of words at all whether of the spoken language or written literature but find expression through the symbology of Mysticism, Music, Painting, Sculpture, Architecture and the like. It is not often recognised, or recognised sufficiently, that all words, spoken or written, are only symbolical—as symbolical, for example, as the lines and contours of the static Arts or the poses and gestures of the Dance recital of Bharatha Natya or other forms of the Dynamic Arts. When we feel thrilled, uplifted and transported to realms of rapture and ecstasy as we read a great literary classic, it is not the words, the writtings consisting of certain black lines on white paper that can, by themselves, produce the exalted result. The words and writtings like painting and sculpture are but symbols suggestive of

something far beyond themselves and capable of evoking in responsive minds some thing of the nature of the great thoughts and ecstatic experiences of the original authors, poets, philosophers, scientists, religious, mystics and other great creators of things of wisdom and grace, love and beauty. The same words and pictures (whether executed by pen or brush or chisel) which mean so much to cultured men and women educated in a particular way may mean nothing to others who are not so educated or not educated at all. Not dissimilar is the case with the fundamental ideas and basic truths of Ayurveda. They are written in a manner and on a background appropriate and natural to the intellectual and aesthetic atmosphere of the ages they were written for. Many of them may now appear quaint to many modern intellectuals whose language of expression and understanding is that of Modern Science. If we wish the treasures of Ayurveda to be understood and appreciated by students of Medicine and Science in Modern India and the world at large, we have to express them in an increasing measure in the language of Modern Science as far as it is possible to do so. The world at large and even intellectual India of the present day will not generally enthuse over the difficult task of attuning their minds to the manners and modes of expression natural to the intellectual atmosphere of the great days of the past when the treasures of Ayurveda forming part of our Ancient Wisdom and its precious Scientific heritage became enshrined in the classical works on Ayurveda. Hence the need—the urgent need—for presenting the Ancient Wisdom, wherever possible, in the language and through the tools of Modern Science, as was done by Bose in the manner already referred to. First things must come first. Research in the fields noted above is one of the

first things to be urgently and immediately provided for. The field to be traversed is vast in extent and rich in content. On the speed and extent of the progress we make in this work and the associated work of compiling new text-books incorporating therein the valuable and necessary fundamentals of both Indian and Western Medicine depends the speed and extent of the progress we make towards our objective of achieving the synthesis of both Indian and Western Medicine into one unified and integrated whole, a subject which will be dealt with later on.

A Note of Warning

It is, however, very necessary in this context to sound a note of warning as what should not be done. We should not torture Ayurvedic Texts to read into them Modern Allopathic teachings through forced comparisons and fanciful interpretations. Where the import of the Ayurvedic Texts as understood in their ordinary and natural meaning is in harmony with the teaching of Modern Allopathy on a particular topic, well and good; we will do well to follow the lines of such fruitful studies and investigations. That would be a real service to both Ayurveda and Allopathy. Where, however, the harmonising of the two teachings is not yet possible in regard to any particular topic when the relevant Ayurvedic texts are understood in their own natural and ordinary meanings, we must not proceed to have recourse to forced and fanciful interpretations as though the final test of the validity of an Ayurvedic teaching is its agreement with the Allopathic teaching on the topic. The ultimate test as to which of the two different teachings on any particular topic should be more acceptable to us should surely be not what label—Allopathy or Ayurveda—it bears but which of them explains better

the facts of experience and works better when applied to problems of health and ill-health. The reason why I am making a specific reference to this aspect of the question is because I see, now and again, attempts being made to read modern Western teachings into Ancient Indian writings by a process of forced interpretations as, for example, when the nomenclature of modern bacteriology is read into certain Ancient texts of the Vedas, or when certain fundamental concepts such as Vata, Pitha and Kapha of the *Thridhatu* Siddhanta of Ayurveda are equated to certain specific things of Western Physiology. In referring to analogous attempts relating to 'Chakras' the late Arthur Avalon (Sir John Woodroffe) observed as follows in his book on "Serpent Power" (Kundalini Shakthi). I desire to add that some modern Indian writers have also helped to diffuse erroneous notions about the Chakras by describing them from what is merely a materialistic or Physiological standpoint. *To do so, is not merely to misrepresent the case but to give it away for physiology does not know the Chakras as they exist in themselves—that is as centres of consciousness—and of its activity as Prana-Vayu, Sukshma or subtle Vital force, though it does deal with the gross body which is related to them. Those who appeal to Physiology only are likely to return nonsuited.* Every word of this is as true of concepts like *Thridhatu*—Vata; Pitha and Kapha as of the Chakras,

Physiology and Anatomy

The Thridhatu Siddhanta

Meaning of the terms "Dhatu", "Dosha" and "Mala". The three Dhatus known, as Vata, Pitha and Kapha are the three elementary and fundamental units or principles on which the building and sustenance of the body depend. Hence it is that they

are called DHATUS', which literally means 'SUPPORTERS'. When they are in normal equilibrium, it is health; and ill-health when they are not in which case the 'Dhatus' are technically known as 'Doshas' literally faults; this is because in this condition they give rise to faults or ill-health in the body. When normally disposed the Dhatus are in their Prasada (or pure state, fit for the building and sustenance of the body; when abnormally disposed, they are in their 'Mala' (or impure) state, fit to be rejected and thrown out of the body as itta (Dross). When looked at from this standpoint of effecting impurity (Malinikarana), they are also spoken of as 'Malas' (impurities). These are the primary meanings of the terms Dhatu Dosh and Mala. The term "Dhatu" has also a secondary meaning when the phrase 'Sapta Dhatu' is used. In this context, it means the seven elementary tissues of Ayurved viz. Rasa (Chyle), Rakta (Blood), Mamsa (Muscle) etc. which will be dealt with later. It is not at all difficult to know from the context in which meaning the term "Dhatu" is used in any particular case.

Functions of the three Dhatus.

It is held that the Dhatus exist in the Human body in two states, viz. the Sthula or the gross and the Sukshma or the Subtle state, Vayu, however, being, according to some authorities, always subtle. In their subtle states, they are Ateendriya—that is to say, beyond the normal cognition of our senses. How then are they known? They are known, both in their normal and abnormal states by the consequences of the actions for which they are responsible. Thus according to Charaka (Sutrasthan, Chapter 18), Pitta, Kapha and Vata are respectively responsible for the following:—Vision' (as opposed to per-

ception, which is due to Vayu), digestion heat-production, hunger, thirst, softness and suppleness of the body, lustre, cheerfulness and intelligence are due to Pitha in its normal state, Snehanam, Smooth working of joints, general stability of the body, general build, potency, strength, forbearance, courage, and greedlessness are due to Kapha in its normal, state. Enthusiasm, inspiration and expiration, voluntary actions like talking and walking, the due, circulation throughout the body of its supporting elements like chyle, blood, etc. Ayurveda speaks of the circulation not only of the blood, as in Modern Western Medicine but also of other Dhatus used as the seven dhatus and the due discharge from the body of its excretory products, are due to Vata in its normal state. These functions of Vata are further elaborated thus by Charaka in the Sutrasthan, Chapter 12. Vayu upholds all the supporting constituents and their due circulation throughout the body. It exists in five forms, viz., Prana, Udana, Samana, Vyana and Apana. It is the urger of all voluntary movements, great and small, the producer of restraint as well as concentration of the mind, the stimulator of all the senses and carrier to the mind of all senses impressions, it holds together the various elements of the body in their proper form and maintains the cohesive unity of the body as a whole; it brings, about speech; it is the basis of sound and touch, as well as the root matter of the organs of hearing and touch; it is the origin of joy and enthusiasm and the stimulator of Agni. It is the cause of the Doshas getting dried up and Malas (impurities) being thrown out of the body; it is the cause of division in all vessels of the body, both microscopic and macroscopic; it is the cause which makes embryos in the womb

(To be Continued)

The Malabar Special Ayurvedic Treatments

By

DR. K. K. NAMBIAR H. P. I. M.

INTRODUCTION

The Malabar Special Ayurvedic treatments are now-a-days well known to all the Physicians and public of our country. Though they are called the Malabar Special treatments, their principles are based upon Sneha and Sweda described in all the Ayurvedic books.

The various lines of treatments adopted according to the Ayurvedic medical science come under three heads:— they are Poorvakarma, Pradhanakarma, and paschat karma. The Pradhana karma or Pradhana chikitsa as it is often called, is necessarily preceded by Poorvakarma and succeeded by Paschat karma for the proper evacuation of the impurities from the body and for recouping the strength or resisting power respectively. The pradhana karma is otherwise known as Sodhana. By undergoing sodhana, one's power of resistance would be considerably reduced and so on the completion of this treatment he is necessarily subjected to a toning up of the system by means of brahmanam and rasayanam. This process by which the body regains the lost health and strength comprises paschat karma.

As a rule, before a patient is brought under Sodhana chikitsa his system is to be prepared for that major treatment by Sneham and Swedam. The first one is intended to loosen (Klinna) the dried and stick impurities (doshas and malas) from the dhatus and asayams (tissues and organs) and the second one—swedam is intended to melt

and bring the impurities to the koshtam (the seats of doshas and malas) for evacuation. The application of these two principles of treatments with their several modifications is known as the MALABAR SPECIAL TREATMENT.

Though sneha and sweda are considered as Poorvakarmas, the Malabar physicians have modified them in such a way that when anybody undergoes the special treatment he gets the benefits of all the three lines of treatment viz. Poorvakarma, Pradhana karma and Paschatkarma; whereas by undergoing the sastric sodhana, the patient has to undergo the sneha and swedam first for a specified period and then only he can be brought under sodhana treatment. Moreover in this treatment, the season, strength of the patient, pathyakrama etc. are to be strictly observed; otherwise there would be complications known as snehavyapath. These restrictions need not strictly be followed in the special treatments and the patient never feels the trouble of undergoing the same. Moreover he would within a very short period derive all the benefits of sneha, sweda and shodhana and Brahman without actually undergoing each of them. On account of this advantage, the special treatments are now resorted to and recommended by many physicians instead of the sastric and ancient sodhana line of treatments.

The Malabar special treatments are twelve in number:—They are (1) Dhara

(2) Pizhichil (3) Sirovasthi (4) Urovasthi (5) Pichu (6) Pothichil (7) Navarakkizhi (8) Bhashpa swedam (9) Pachakkizhi (10) Uzhichil (11) Padaghatam (12) Udwarthanam.

Among these, Dhara is the most important one. Dhara means the flow of medicated oil or kashaya or ksheeram from a suspended vessel to the forehead or to any affected part of the body at a uniform speed and height for a limited time. Pizhichil is a malayalam word, which means squeezing. By this a piece of cotton or sponge is soaked in medicated oil and squeezed over the body every now and then and slowly massaged for one to one and half hours. Sirovasthi is the application of oil to the head by means of a leather cap specially prepared for the purpose according to the size of the head of the patient. Urovasthi also, is a similar treatment but in this oil is poured over the chest wall where a circular wall is raised by means of black and green gram paste (kalkam). Pichu is the application of ghee, oil or milk to any affected part of the body by means of cotton or lint. Pothichil is another malayalam word which means covering. In this Amalaki kalkam or any other kalkam suitable for a disease is applied to the head and it remains there for half to one hour after which time the same is removed and oil is again applied to the head. Navarakkizhi, Bhashpa swedam and Pachakkizhi are different types of swedam. Navarakkizhi is other wise known as Pinda sweda. Navara is the Shashtika Dhanya which yields in sixty days. Kizhi means a bundle. So in this treatment a bundle of boiled Navara rice is used for fomenting and massaging the body. Pachakkizhi is the Pathrabhanga swedam described in Ayurveda. Here fresh medicinal leaves are cut into pieces, fried in suitable medicated oils and they are then bundled and used for fomenting. Bhashpa sweda is

medicated steam bath. the malabar physicians use a wooden case with the cane lattice on the top and chambers at the bottom to keep vessels containing medicated kashayam for steam. By this method the whole body of the patient would be fully exposed to the steam and no steam would escape outside.

Uzhichil, Padaghatam and Udwarthanam are various types of massages. In all these, medicated oil is first smeared over the body and then only massage in increasing intensity is applied. Uzhichil is massage in the Anuloma direction and it is painful. Padaghatam is also a hard massage done by the foot of the masseur. In this case also pain is unbearable in the beginning but towards the end of the treatment it would be reduced to considerable extent. This massage is previously practised by the people who engage themselves in various kinds of dances and physical exercises in order to bend or twist their body in whatever form or direction they liked. The udwarthanam is a massage in the upward direction (Prathiloma) In this, oil is first applied and then some medicinal powder is sprinkled all over the body and then the massage is conducted.

This is in short an idea of the special treatments. The technique, indication etc of these special methods would be dealt in detail in course of a few articles.

UPAKARANAMS

(Apparatus required for the special treatment)

The most important apparatus required for conducting the special treatments are the following:—

- (1) Dharapathi or droni (a wooden plank)
- (2) Dharachatti (a vessel)
- (3) A serrated coconut shell or metal cup

Dharapathi

This is made out of many medicinal trees.

पुष्पोदुंबरगन्धसारधरण्यप्रोचदेवद्रुमाः ।

पुष्पागाढकपिन्धचोचबकुलाशोकसनाम्रास्तथा ।

डोळचपकविल्वनिंबखदिरामोघाग्निमन्थार्जुना

इत्याद्यन्यतमेनसेचनविधौ द्रोणीप्रकुर्यात्तुघ्नः ॥

They are the following:—Plaksham (Ficus Infectoria) Udumbaram (Ficus glomerata) Chandana (Santunam album) Varana (Crataeva Religiosa), Nyagrodha (Ficus Bengalensis) Devadaru (Cedruis Deodar) Punnaga, Kapitha (Wood apple tree) Chocha, Bakula (Memesops Elanyi) Asoka (Saraca Indica) Amra (Mango tree), Bilwa (Bael tree) Khadira (Acacia Catechu). From the above list, Asana, Asoka, Aswatha etc are generally used. But the Malabar physicians use Karaskara (Nux vomica tree) and Amalaki (Indian gooseberry tree) for preparing Dharapathi for they say that these two trees are thridhosha haram.

After selecting the tree to make a suitable dharapathi, it is prepared with the following measurements:—

द्रोणीद्वस्तचतुष्करीर्धकरमात्रव्यासतत्पादमा —

त्रोघत्भित्तियुता द्वादसमतलायादान्तरन्ध्रावहिः ।

शीर्गस्थानहोषतैककरमात्रा तानकिस्तारका —

निष्ठाकिञ्चनमभ्यतश्चरणैर्हस्तेभ्युक्तादृष्टैः ॥

The length of the wooden plank (droni) is about four hasthams i.e. about 6 feet

(I hastham-1½ ft), but in practice it is found that this length is not sufficient. Hence now-a days it is prepared in such a way so that the length is about 8 to 10 feet and breadth about 2 to 2½ ft. At the head portion of droni, there is a raised ridge which serves two purposes; the first, is that it does not allow the dhara fluid or oil to mix with the oil applied over the body of the patient and the second is that it serves as a rest on which the neck of the patient is rested conveniently when in the lying posture. Beyond this raised portion at the top there is a cuplike hollow with a hole at its bottom to allow the dhara-dravam to flow down into a vessel kept underneath. The edges of the droni are raised by two inches from its surface to allow fluids or oils poured over the patient's body to remain inside the droni. At the four corners of the droni, four handles are attached, the length of which may be four to eight inches each. These handles are to be cylindrical in shape and smooth so that two people can easily handle it and carry from place to place. Underneath the four corners, four legs are fixed. The height of each should be about 8 to 10 inches. The whole apparatus may even be mounted on a stand whose height is about one's waist so that the treatment may be conducted with ease and convenience.

(To be continued.)

Renaissance of Indian Medicine (Research)

By

DR. G. SRINIVASAMURTI, B.A., B.L., M. B. & C. M.,

In commenting on the present state of Medical Research in India, the Bhoré Committee have stated that 'In Western Countries, Medical Research is undertaken chiefly in the various departments of the Universities, Medical Colleges and teaching Hospitals. Research is, in fact, an almost universal activity in such institutions and is regarded as a normal function. Broadly speaking, Medical Research receives little or no attention in the Medical Colleges of India. The outstanding defect at the present time is almost complete absence of organised Medical Research in the various departments of the Medical Colleges and these are just the institutions which provide the most favourable and most desirable location in which to establish Research Centres'. These remarks were made with reference to Research in allopathic Medicine. If Research in Indian Medicine is to escape a similar reproach, we have to see to it that the outstanding defect pointed out by the Bhoré Committee namely the almost complete absence of organised Medical Research in the various Departments of Medical Colleges is avoided right from the start, and that Research in Indian Medicine is organised as a normal function and universal activity of our schools and Colleges of Indian Medicine and the Hospitals and other Departments—both clinical and pre-clinical attached thereto. In other words, *Medical Research, Medical Education and Medical Relief should be organised as vital and interdependent parts of an integrated whole*, so that the workers in all these fields carry on their duties in close collaboration and fruitful relationship with one another and also maintain intimate

relationship with common lives and the common needs—both individual and social—of the common man as well as the uncommon man. It is in the atmosphere created by such an integrated organisation that the spirit of Scientific enquiry coupled with zest for social service can be best built up into the lives of our students, teachers, doctors and all others concerned as a matter of almost unconscious and automatic activity leading to what we may call the Research-habit and the Research-out-look. Where work is carried on in such a way that all workers are research-minded all the time and the students are trained for a period of not less than four to five years and carry on their work in an atmosphere charged with such research-mindedness and with the most careful and devoted attention to problems for the promotion of positive health among the public and of kindly and efficient relief to those suffering from ill-health and sickness, it is there that we will have the proper Research atmosphere well calculated to produce the best results.

CLINICAL RESEARCH:

Having regard to the present day conditions in our country, Clinical Research should have high priority in our programme of Research in Indian Medicine. There may be fields of Research appropriate to specialists; but in the field of Clinical Research, the general practitioners with their intimate living touch with the common ailments of the common people are especially fitted to make valuable contributions. Examples are not wanting even in recent times to show how treatment of even new diseases could be successfully undertaken by

practitioners of Ayurveda by the applications of those fundamental principles of treatment that have served them exceedingly well throughout the ages. They have also realised that even ancient diseases exhibit variations in their manifestations, from age to age, and country to country, as also in relation to changing conditions of individuals and their social and other environments. They have gone on taking note of all these factors as they occurred and adjusted remedies and diets appropriate to the changed and changing conditions. For Research in these fields, it is necessary to gather clinical data on a sufficiently large scale and check up results. It is desirable that such Research is carried on in institutions where there are facilities for a hearty co-operation between practitioners of Indian and Western Medicine. The actual treatment should be left to practitioners of Indian Medicine while specially selected Allopathists (qualified in Indian Medicine also, if available) should collaborate as Medical Registrars and maintain careful, detailed and accurate records to the Clinical features, diagnosis, treatment and daily progress of all cases treated in the Clinics and publish the results in such language as would enable the followers of Western Medicine also, to benefit from them if they wish to.

PHARMACOLOGICAL RESEARCH:

Clinical Research will also serve as a valuable guide in fixing our programme of Pharmacological Research by helping us to pick out, from the large number of reputed drugs and remedies which texts and traditions prescribe for each disease, just those which have been found by Clinical Research to work satisfactorily under condition of our present day and to be suitable to the constitution of our present generation. Chemical and Pharmacological Research may then fruitfully concern itself with

such selected drugs only, at least in the beginning.

Then, too, there is the great need for Research on the wholly uncharted field rich in the treasures of Iatro-Chemistry—Bhasmams, Sindurams, Churnams, Kattu Khusthai and the like used by Ayurvedic, Siddha and Unani Practitioners. Who would not like to know for instance, what is it that makes Chandrodāyam or Makaradhavajam the Rasayanam and Amritam that it is while its chemical equivalent Sulphide of Mercury, does not find even a passing mention in our Official Allopathic Pharmacopoea? Through methods of Nuclear Physics, Chemistry, Bio-Physics and Bio-Chemistry and Pharmacology it may be possible to start investigations in these wholly uncharted and most fascinating fields of enquiry.

We may next consider *Literary and other related items of Research*. Much work remains to be done in regard to Medical literature available for the use of Practitioners and Research workers. A number of works have still to be treated out by diligent search into existing collections of manuscripts. All authoritative writings on every subject have to be gathered together and published so as to become available for ready reference to all physicians engaged in general practice and more particularly to those engaged in Research relating to *Nutrition, sick-dieting and domestic medicine, Health-education, Health-culture and the like, for all of which literary Research will have to provide the basic source-material*.

Pharmacognocny and the standardisation of raw drugs and prepared medicine is another line of investigation which could be usefully undertaken at once. Under modern conditions, it frequently happens that, raw herbs and drugs are not collected by the practi-

tioners themselves as in the old days but are bought from bazaar supplies, which are not always genuine or of good quality. Hence the urgent need for Pharmacognosic Research for proper identification of raw ingredients and the setting up of properly organised Herbaria and Botanical Gardens. If we succeed in standardising the raw drugs entering into the composition of our prepared medicines, the way is then open for undertaking the standardisation of the prepared medicines of the Pharmacopia of Ayurveda.

We may next consider the subject of Research relating to presentation of Ancient wisdom through the language of Modern Scientist and for preparing new text-books suitable for Modern conditions. For a proper appreciation of the treasures of Ayurveda by the present generation of intellectuals in India and the world at large, it is necessary to present them, wherever possible, in the language of Modern Science. This may be illustrated by an example with reference to the great work of our distinguished countrymen the late Jagadis Chandra Bose. With the aid of his marvellous instruments of great delicacy and precision he demonstrated to an astonished world that the response to stimuli of both the so called living (eg. animals) and the so called non-living (e.g. plants) were so strikingly similar as to suggest one common life animating both kingdoms of Nature; but he was never tired of proclaiming from the house-tops that what he demonstrated was nothing new but was only part of that ancient wisdom which our great forefathers taught many millennia ago on the banks of the Ganga. This is certainly true. Nevertheless, the fact that Bose demonstrated the truth of the ancient teaching by methods and through tools of Modern science did serve to carry convictions to minds of

moderners in a manner that was not realised before even by Indians familiar with the teachings of our Ancient wisdom. It made the ancient teaching live once again in our minds as a living reality and be treasured as our precious and valued heritage—one of the many that diligent research by competent investigators of the present and the future may unveil in course of time. Such, for example, are the Panchabhuta Theory of Matter with its Matter-mind Parallelism and correspondence, (the Pancha Bhuta, the Pancha tanmatra and Pancha Indriya relationship) which integrates in a wondrously illuminating way our Physical and Biological Sciences into a fundamentally inseparable unity of origin and evolution; the Thridosha Physiology Pathology and Therapeutics the Dravya-Guna-Virya-Vipaka Prabhava pharmacology; the Sankhya-yoga Psychology-theoretical and applied, the Vedantic view of Prana (Life Principle) and the conception of man as Atman or spirit working through five koshas (Anna maya, Prana maya Manomaya Vignana Maya and Ananda maya) and not merely as Anna maya kosha which as stated above, is dissected as corpse by Modern Anatomy and equated to living man by Modern Physiology. Research in the fields noted is one of the first things to be urgently and immediately provided for. The field to be traversed is vast in extent and rich in content. On the speed and extent of the progress we make in this work and the associated work of compiling new text books incorporating there in the valuable and necessary fundamentals of both Indian and Western Medicine depends the speed and extent of progress we make towards our object of achieving the synthesis of both Indian and Western Medicine into one unified and integrated whole. In regard to the several fields of Research-topics just mentioned many

things are happening in the Western Scientific world of to-day which seem to bring the view of ancient wisdom and modern science sufficiently near each other as to hold out bright prospects of most fruitful results accruing to both science in general and Medicine in particular, if we could provide for Research in these fields by team-work of competent experts of both Ancient wisdom and Modern Sciences. I could now refer here to only one such field by way of illustration and that is the field of Psychology and psychological Research. Psychology in the West is a Science of comparatively recent origin—specially Medical psychology as expounded by Fraeud, Adler, Jung, McDowgal, Hughlong Jackson and other exponents of the various schools of present-day psychology. Here, in the East, however, it is one of the oldest and well nurtured sciences both in its theoretical teachings and practical applications in the various disciplines of yoga (which is real applied psychology) as well as in the field of Medicine where its teaching relating to the several levels of Human consciousness and to the psychosomatic concept of health and disease in man should prove specially helpful and illuminating.

We may also mention in this connection the invaluable help and direction that applied psychologically may give to our methods of approach to research. In Modern Science, the investigators seek to overcome the limitation of the senses by equipping themselves with external aids like the Microscope, the Telescope, the Spectroscope, the Cardiograph and the like. In Ancient Ayurveda as in other Sciences of the ancient wisdom, the investigators sought to obtain similar and more extensive results, not by providing their senses with external aids but by improving the powers of their own internal organs of

sense (Indriyas) in certain ways indicated in the Yoga and other Sastras and taught by the Guru or the Master to the Sishya or Disciple, so as to enable him to perfect the 'Sense' (in which term they included the mind also as the 'sixth sense' or Indriya) to so great a degree as to include, within their range, everything from the most microscopical from the Paramanu to the Paramahatw' as the Sastra put it. However fantastic the claims for the possession of such faculties may have appeared till yesterday, there should now be a realistic appreciation of these faculties as they are being studied now with diligence by certain advanced thinkers and experimental scientists of the West. That Man possesses faculties higher than mind seems now to be recognised by Modern science. By following strictly scientific methods of investigation, Dr. J. B. Rhine, Professor of Psychology at the Duke University, U. S. A., and Dr. J. Hettlinger of the London University have demonstrated the reality of the supra-mental faculties in their descriptions of "Extra-sensory Perception", "Ultra Perceptive Faculty" and "the new frontiers of Mind" "Clair-voyance" Dr. Alexis Carrel, Noble Prize Laureate, recognizes the faculty of intuition as an instrument of research. In his book he always mentions "Man, The Unknown", he has written that Men of Science belong to two different type—the logical and the intuitive. Science owes its progress to both forms of minds". While the approach to Research and ascertainment of truth through the method of observation and experiment followed by Modern Science has been followed throughout the ages by the great Acharyas of Ayurveda and our Ancient wisdom generally under the heads of Pratyaksha and Anumana pramanas, they have also recognised

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FUNDAMENTALS OF AYURVEDA

By

AYURVEDACHARYA DR. A. RAMAN A. I. A. V.

I know that the staff and the students of this institution had the rare privilege on many occasions before to enjoy brilliant lectures from eminent scholars on different subjects. I consider it a privilege to be asked to deliver lectures to this enlightened assembly of the staff and students of this institution and other learned gentlemen. I accepted this invitation with some diffidence because I feel my powers are limited. The subject I am to deal with is vast and scientific and stands on a peculiar footing. You have heard it said very often that Ayurveda is unscientific and empirical, and I hope to be able to expose to you the hollowness of this statement. If Ayurveda is not scientific, it is not worth pleading for. But before we go to abstruse discussions, I think it will help you to understand the subject better if we look into the past for a while.

My object in addressing you this evening is to promote mutual understanding between medical men of Western and Eastern systems. I do not blame the former for looking down upon the Ayurvedic practitioners. It is partly our own fault. We have not been able till a few years back to explain to the modern world as efficiently as we ought to, the principles of Ayurveda in their language. All the work of Ayurveda are in a language that is mostly un-intelligible to the Allopathic medical men. There are, no doubt, learned

scholars like, Dr. Guruswami Mudaliar, Hony. Director of this Department Captain Srinivasa Murthy, ex-principal of this College, Dr. Pathak, the principal of the Ayurvedic College of Hindu University, Dr. Musker of King's Institute of Bombay, Dr. Pranjivan M. Metha of Jamnagar and others, who had been trying their best to enhance the reputation of our own medicines, Ayurveda, by correct interpretation of the same for the benefit of others. How I wish we have more men like them. But most of the doctors, I am afraid, are unable to dive deep into Ayurvedic literature because the literature is mostly in Sanskrit and there are very few translations in the field now; what is worse, there are some translations, which being mercenary, are liable to mislead us. Such translations have misled many people; and their authors stand self-condemned. We find, for instance, Vata Pitta and Kapha mistranslated as Wind, Bile, and Phlegm.

First of all, I would request you to be aware of these translations. Many an apparition is conjured up in the darkness of ignorance. You must beware of such apparitions. And I ask my friends of the Western System, some of whom have devoted a year or more to the study of German or French for the better understanding of medical works in those languages—why should they not devote a year or two to the study of Sanskrit which is the only language of Ayurveda,

scholars wherever their lots may cost. So far as I can judge, the language is easy to learn because it fits in easily with the genius of Indians. Except in languages such as Tamil, Tibetan etc. in which are very few Sanskrit words there abound in the majority of the Indian languages such as Hindi, Bengali, Telugu Malayalam etc. I therefore plead for your trying to understand Ayurvedic works in their original and not their translations. Besides it is a highly technical subject and translations unless made by men of high technical knowledge and expressive capacity can never convey the meaning intended by the writers. Once the subject is understood, I dare say we shall be able to draw the sympathy and co-operation of our colleagues of the Western system. Undoubtedly it is misunderstanding that has stood largely in the way of progress in this direction.

As for the advantage that you can derive from the adoption of Ayurvedic treatment for the masses, they are many. The most important of them are cheapness and efficacy for which the masses have adopted it since its inception. As the State encouragement for Ayurvedic institution has not been so long as good as they should be, there are not now a reasonable number of properly equipped and efficient Ayurvedic organizations. As a result of this, quackery has naturally come into existence. But do not blame the system for that. Quacks are bound to be in every system and that is no fault of the system concerned. We ourselves are responsible for this state of things; for we have not tried to regulate the practice of Ayurveda, and advance its causes whole-heartedly. Hitherto the popularity of Ayurveda has been due mainly to the cheapness and efficacy of the recipes, not so much to the merits, in many cases, of the per-

sons who practised the system. Ayurveda, the perfectly designed scientific system must have its great success amongst the people on its own merit. Hence the great success.

The methods of treatment recommended in Ayurveda are quite scientific. Take for instance the method of salt-free diet in cases of dropsy. It has been borne out by scientists as a rational and scientific method. We had been practising this method for a very long time and the West only discovered its utility recently. Such also is the method employed for treating catarrh with errhines. (sirovirechanam) Another method is the systematic use of emetics in Asthma, and colon-washing (vasti) in intestinal diseases, Sciatica etc. There are many such scientific lines of treatment recommended in Ayurveda, which were not known to the West till recently and are just being discovered by the practitioners of the Western system. They don't know that they are mainly Ayurvedic in origin.

"If the physicians of the present day would drop from the pharmacopoeia all the modern drugs and chemicals, and treat their patients according to the methods of Charaka, there would be less work for the undertakers and fewer chronic invalids in the world." G. A. Clerke-M. A. M. D. New York,

WHAT IS AYURVEDA—Ayurveda, as originally conceived, is the "Science and Art of living a happy long life in a manner useful to society". Such is Charaka's definition of Ayurveda. It has for its objects: "The preservation of health in the healthy and the restoration of health to the diseased," (Sushruta). Ayurveda thus considered is the science of life in all its aspects—Hygiene and Preventive Medicine first and the different branches have been enumerated as

follows (vide Charaka, Sutrastan, Ch. XXX)

(1) Kaya-Chikitsa or Medicine proper, the Diagnosis and Treatment of diseases in general; (2) Salakya-Tantra or the Diagnosis and special treatment of diseases of the Eye, Ear, Nose and throat; (3) Salyatantra comprising Surgery and Midwifery together, (4) visha-gara-Vaiodhik, otherwise called Agadatantra in Sushruta, meaning Toxicology in its widest sense and including the treatment of Snake-bite, Rabies, Rate-bite, scorpions, stings insect-bites etc including the microbic infection through the air and water (5) Bhutavidya or the Hypnotic treatment of the so-called ghost-possession (which are originally understood to be so many phases of mental disease); (6) Kaumara-bhritya or Pediatrics (Treatment of diseases of of schidren); (7) Rasayana- Tantra or the Science of rejuvenation in old age; (8) Vajeeekarana-Tantra or the Science of preserving and restoring the reproductive function. Now, the first six out of these eight divisions correspond to similar though differently grouped branches of study in the Western Medical Science and last two are now coming into vogue in the West and are being keenly worked out by the scientific men there.

It is clear, therefore, that the field covered by Ayurveda in ancient days must have been wider than the field covered by the Western Medical Science even as it is constituted now in the 20th. century. Add to this the Veterinary Science which is part of Ayurveda and comprises (1) "Gajayurveda" dealing with elephants (2) "Ashwayurveda", dealing with horses, (3) "Gavayurveda," dealing with cattle etc. on which subjects voluminous books like पालकाव्यसंहिता, शालिगोत्रसंहिता etc still survive. "Vrikshayurveda" was also another part of Ayurveda that dealt

with the physiology and treatment of plants which were called (b) स्थावरजीवः or stationary animals possessed of almost all the functions of animal life. It is said अन्कः संज्ञाभन्त्येव सुखदुःख समन्विताः (मनुसंहिता महाभारतम् "They have a hidden consciousness capable of realising pleasure and pain."

These verses are found in Sree Sivatat-varatnakara. This proves that the old ideas of the three doshas had a broader conception of their meaning than understood by the Scholars.

नराणामिव वृक्षाणां वातपित्तकफाः गदाः
संभवन्ति यतस्तस्मात् कुर्यात्सहोष नाशनम्
कशोदीर्घोऽलघूक्षो निद्राहीनोऽप्यचेतन
नक्षते फलपुष्पाणि कातप्रकृतिकस्तदः
आतपासहनः पाण्डुः शास्त्राहीनो मुह्यति
अकालपाका स्याच्छास्त्री सतुषितात्मकः
कृशः

सिद्धशास्त्रादल शास्त्री सम्यक् पुः फलोऽश्नः

It is a pity that medical men-at least most of them-do not care to know the history of their own art. In the western mind, there is a vague impression that systematic study of the healing art was started in Greece or Rome or Arabia. Indian medical men trained on purely western lines think likewise on hearsay evidence. That all these countries owe a heavy debt of gratitude to India, that India shone bright in the firmament when other countries were plunged in the deep gloom of barbarity, that India still retains part of its intellectual splendour in the bosom of her vast Sanskrit literature are truths that seldom flash upon their minds. For they consider themselves highly educated with only one-sided education forgetting that the ignorance of Sanskrit (for which the

present educational system of Indian Universities deserves the greatest blame) deprives them of the vast riches of their fore fathers in the fields of Science, Art, Literature and Philosophy. Indeed their ignorance becomes simply unpardonable when it is tied by the idea that the science and art of Medicine and Surgery have come from the West alone.

A science treating of life cannot ignore the most important question of organic evolution and this in its turn leads to dissertations on the equally important problem of the evolution of cosmos. It is from cosmic evolution upwards therefore, that the study of Ayurveda begins. This may be pointed out, however, to the credit of the ancients, that though their science begins with the most difficult problem of the cosmic evolution their conception of this subject is far from vague and in no way a product of mere speculation. Their clear and faultless exposition testifies that they arrived at these results through positive and scientific reasoning based on keen observation of the natural phenomena. As we go deeper into the details of the evolution of cosmos from the formless, unmanifest, the limitless Prakriti the ultimate ground, it becomes clear that they have proceeded in their analysis of the phenomena of nature from the known to the unknown, solving the mysteries of Nature with their accumulated stock of knowledge; and not from the unknown to the known or from the unreal to the real, reconciling the inconsistencies through mere speculative reasoning. The Ayurvedic theory of Evolution is a combination of Sankya, Patanjala, Nyaya, and Vaisheshika systems of Indian philosophy in their most scientific aspects. The Sankya Patanjala system, which is mostly adhered to or which may be said to have followed the Ayurvedic precepts more closely in its

main structure, "possesses a unique interest in the history of thought as embodying the earliest clear and comprehensive account of the process of cosmic evolution viewed not as a mere metaphysical speculation but as a positive principle based on the conservation, the transformation, and dissipation of energy."

The Ayurvedic conception of evolution rests somewhere between the Sankya-Patanjala and the Nyaya-Vaisheshika theories. Both these theories have been treated at length by that great savant of Oriental learning, Dr. Brajendra Nath Seal, in his learned and erudite work, "The Positive Science of the Ancient Hindus". Reproduced below is an abridged extract from this work to present the idea of evolution as conceived by the early Ayurvedic writers. I have substituted Ayurvedic texts here and there, instead of the original ones, where necessary, for the purposes of conviction and illustration.

"The manifested world is traced to unmanifested ground, Prakriti, which is conceived as formless and undifferentiated, limitless and ubiquitous, indestructible and undecaying, ungrounded and uncontrolled, without beginning and without end. But the unity of Prakriti is a more abstraction, and indeterminate infinite continuum of infinitesimal Reals. These Reals, termed Gunas, may by another abstraction be classed under three heads (1) Sattva, the Essence which manifests itself in a phenomenon, and which is characterised by the tendency to manifestation; the essence in other words, which serves as the medium for the reflection of Intelligence; (2) Raja Energy that which is efficient in a phenomenon, and is characterised by a tendency to do work or

overcome resistance; and (3) Tamas, Mass or Intertia, which counteracts the tendency of Rajas to do work, and of Sattva to conscious manifestation”

Sushruta describes Prakriti the ultimate ground in the following terms :

सर्वभूतानां कारणमकारणमस्त्वरजस्तमो-
लक्षणं अष्टरूपं अखिलस्य जगतः संभवहेतुः
अव्यक्तनामः

“Progenitor of all creation, Self-begotten, Connotation of the three Reals, Sattva, Rajas and Tamas, Existing in Eight Forms

अव्यक्तं, महान्, अहंकार, शब्दस्पर्शरूपरस-
गन्ध तन्मात्राणि.

the sole cause or Factor in the evolution of the universe. This is named Avyakta or unmanifest (Sushruta Sharirasthana, II.)

It is also described as beginningless अनादि endless and limitless अतन्त्र in conceivable, unknowable, and formless, everlasting and indestructible नित्य unexcelled अलिंग अवर and ubiquitous सर्वव्यापी

The three Gunas (Sattava, Rajas, and Tamas), which are the sole constituents of Prakriti, are the ultimate factors of the Universe. There are, 1. Essence or intelligence-stuff, 2. Energy and 3. Matter characterised by Mass or inertia. Although these Gunas are conceived to be Reals; substantiative entities, they are not self-subsistent or independent entities प्रधान but have interdependent momenta in every real or substantiative Existence.

Even Energy is substantiative in this sense. The infinitesimals of Energy do not possess inertia or gravity, and are not therefore material, but they possess quantum and extensity (परिणाम परिच्छिन्नत्वम्). The very nature of Energy is therefore ultimately kinetic; even potential Energy is therefore the energy of motion in imperceptible forms”.

The three Reals, Sattva, Rajas and Tamas enter everything in close union as essential constitutive factors. “The Essence of thing (Sattva) is that by which it manifests itself to intelligence, and nothing exists without such manifestation in the Universe of Consciousness. But the Essence is only one of the moments. It does not possess mass or gravity, it neither offers resistance nor does work. Next there is element of Tamas, mass, inertia, matter-stuff, which offers resistance to motion as well as to conscious reflection. All work comes from Rajas only which overcomes the resistance of matter and supplies even the intelligence with the energy which it requires for its own work of conscious regulation and adaptation.”

“The Gunas are always, uniting, separating, uniting again. Everything in the world results from their peculiar arrangement and combination Varying quantities of Essence, Energy, and Mass in varied groupings, act on one another, and through their mutual interaction and interdependence evolve from the indefinite or qualitatively determinate. But through cooperating to produce the

world or effects, these diverse tendencies never coalesce. In the phenomenal product whatever Energy there is due to the element of Rajas and Rajas alone; and all conscious manifestation due to Sattva.

“The nature of the interaction is peculiar. In order that there be evolution with transformation of Energy, there must be a disturbance of equilibrium, a preponderance of either Energy or Mass resistance or Essence over the other moments. The particular Guna which happens to be predominant in any phenomenon becomes manifest in that phenomenon, and the others become latent, though their presence is inferred by their effect. For example in any material system at rest the Mass is patent, the Energy latent, and the Conscious manifestation sublatent. In a moving body the Rajas Energy, is predominant (Kinetic) while the Mass, or rather the resistance it offers is overcome. In the volition consciousness accompanied with movement the transformation of Energy (or work done by Rajas) goes hand in hand with the predominance of the Conscious manifestation, while the matter-stuff or Mass though latent, is to be inferred from the resistance overcome.”

“The Starting-Point in the Cosmic history is a condition of equilibrium or equipoise consisting in a uniform diffusion of the Reals. The tendencies to conscious manifestation, as well as the

powers of doing work, are exactly counterbalanced by the resistance of the inertia or mass; the process of cosmic evolution (परिणाम) is under arrest. The transcendental (non-mechanical) influence of the Purusha (the Absolute) puts an end to this arrest, and initiates the process of creation. Evolution begins with the disturbance of the original equilibrium—The particles Sattva, Rajas, and Tamas possess a natural affinity for other particles of their own class, and when the transcendental influence of the Purusha ends the state of arrest, the affinity comes into play, breaks up the uniform diffusion, and leads to unequal aggregation, and therefore to the relative preponderance of one or more of the three Gunas over the others. Thus commences formative combination among the Reals and consequent productive activity.

“Creative transformation accompanied with evolution of motion (परिस्फन्द) and work done by energy (क्रिया) cannot take place without a peculiar collocation of the Reals. To form wholes or systems it is essential that one Guna for the moment be preponderant and the other cooperant. And this cannot be without an unequal aggregation which overthrows the original equilibrium (गुणैः परस्परं युक्तं यत्कालम्) in other words with out unequal forces are stresses coming into play in different parts of the system Evolution in its formal aspect is defined as differentiation in the inte-

grated. In other words the process of evolution consists in the development of the differentiated (वैषम्य) within the undifferentiated (साम्यावस्थ) of the determinate (विशेष) within the indeterminate (अविशेष) of the coherent (युतसिद्ध) within incoherent (अयुतसिद्ध).

The manifested knowable Universe, cosmic matter of experience, things as matter of stuff of consciousness (लीग) comprising Mahat, the intelligible Essence of the Cosmos, is evolved by differentiation and integration within the formless, characterless, and inconceivable Prakriti. This cosmic matter of experience evolves within itself by the same process differentiation and integration and individuated but still indeterminate matter-stuff (चहकार) in two co-ordinated series Subject and Object, comprising on one hand the indeterminate unity of apperception, or the empirical Ego, as the coordinating principle of the Subject series, and on the other hand, the indeterminate material potencies, the subtle vehicles of potential energy (नन्मात्रसूक्ष्मभूत) the ultimate subtle constituents of the Object series (the material world).

The Subject and object experience evolving into determinate from indeterminate produce on one side the sensory and motor stuff and other coherent and integrated matter stuffs एकादशेन्द्रियाणि individual substances characterised by generic and specific properties.

"Sushruta gives the following of the above mentioned twenty-four funda-

mental principles in the history of evolution, Prakriti, Mahat, Ahankara, and then the bifurcation into 1. Subject series, comprising five Jnanendriyas, five Karmendriyas, and Manas पञ्चज्ञानेन्द्रियाणि पञ्चकर्मैन्द्रियाणि एकमन sensory motor, and common sensory motor; and 2. Object series, comprising the five Tanmatras तन्मात्रा subtle material potencies and the five Mahabutas पञ्चभूत Akasha, Vayu, Tejas, Ap, and Urvi.

तः त्रय्यकान्महानुपगच्छते तल्लिङ्गपञ्चतल्लिङ्गमात्रं महत्तन् लिंगपञ्चकार उभयपक्षे समन्वितो वैकारिकस्तैजसो भूनादिरिति तत्र वैकारिका दंकारात् तैजससाधार्यात् तल्लक्षणा एवैव एकादशेन्द्रियाण्युत्पाद्यन्ते-तद्यथा श्रोत्रं च कचक्षुर्जिह्वाघ्राणवाक् च स्थोऽस्य पायुषादमता सीति-तत्र पूर्वानि पञ्चबुद्धीन्द्रियाणि इतराणि पञ्चकर्मेन्द्रियाणि अनयात्मकम मनः भूतादेर पितैजससहायात् तल्लक्षणान्येव पञ्चतन्मात्राण्युत्पाद्यन्ते तद्यथा शब्दतन्मात्रं स्पर्शतन्मात्रं रसतन्मात्रं रसतन्मात्रं गन्धतन्मात्रमिति तेषां विशेषाः शब्दस्पर्शरूपरसगन्धाः तेभ्यो एतानि व्योमिति लानलजलोप्यः एवमेषां चतुर्विंशतिर्याव्याता - (सु-श-अ-१)

These twenty-four forms of Prakriti are the fields क्षेत्र in which the individual soul क्षेत्रज्ञ descends under certain concomitant conditions. Sushruta's conception of the Purusha or individual self is as follows :

नचायुर्वेदशास्त्रेषूपदिश्यन्ते सर्वगताः क्षेत्रज्ञाः नित्याश्च असर्वगश्च क्षेत्रज्ञेषु नित्यपुरुष व्यापकानहेतुनुराणि. आयुर्वेदशास्त्रसिन्धुनाम्नेषु असर्वगताः क्षेत्रज्ञानित्याश्चित्ययोगिमानुष देवेषु

संचरन्ति धर्माधर्मा निमित्तं नपदेनुमान प्राज्ञाः परमसूक्ष्माश्चेतनावन्तः शाश्वतालोहित रेसः सन्निपातेष्वभिव्यज्यन्ते यतोभिहितं पञ्चम हाभूत शरीरिसमवायः पुरुष इति स एष कर्म पुरुष चिकित्साधिकृतः ॥

The science of Medicine does not lay down that the self-conscious selves क्षेत्रज्ञ are all pervading, but on the contrary, it asserts that they are real and eternal and are born in the planes of divine, human, or animal existence according to their goods or evil deeds in life. The existence of these self-conscious entities can be ascertained in as much as they are extremely subtle in their essence. The self-conscious self is possessed of infinite consciousness, is real and eternally subject to the process of being evolved out into a finite organic individual through the dynamics of the combined sperm and ovum. The view is further corroborated by a dictum of Sruti which holds that Purusha (individual) is nothing but a combination of a self and five kinds of matter formed into an organic body. This Purusha or individual, which is called individual of action (Karma Purusha) falls within the scope of the science and art of medicine."

K. L. Bhishgratna Susrutha fame appends the following note to the above

"Here lies the difference between Sankhya and Ayurveda. While the former discourses on immaterial character of the soul, the latter commences to discuss on the question how the material environment which the soul is said to inhabit is evolved, and how the inclusion spiritual within the material organism is effected.

Hence Sushruta's Physiology, like that of Charaka is in the strictest sense of the word molecular and his science of life is an attempt at explanation of consciousness from the materialistic standpoint, which agrees with the views of the modern Western science. Intellect according to Sushruta is material and belongs to the same category which the Sankhya system of philosophy in its explanation of evolution enumerates originally as seven. The soul, according to Sushruta, is an independent existence and is often associated with what is called life. Where there is life there is a soul and it is not everywhere the same. The soul in Sushruta, is individual राशिजपुरुष and takes cognisance of sorrow, disease and death by its on with the body पञ्चमहाभूतशरीरि समवायरूपः इत्युच्यते Hence the living frame together with the soul that is said to inhabit it forms the subject of Ayurvedic treatment."

(Continued from Page 23)

another and a higher method, specially applicable to fields which are beyond the range of observation of the five senses of the average man of to-day. It is a matter of great satisfaction that these two methods which may be designated as 'The Experiment' and

'The meditational or intuitional methods' and the part to be played to them in our schemes of Research in Indian medicine have been duly recognised and recommended by the Chopra Committee in their report.

Gems from Charaka

BY

DR. T. P. RAJAGOPAL, M. P. I. M.

The Ten Points of Examination

The ten points which a physician must be thorough with are 1. KAARANAM 2. KARANAM, 3. KARYAYONI, 4. KARYAM, 5. KARYAPHALAM, 6. ANUBANDHAM 7. DESAM 8. KALAM 9. PRAVRITHI 10. UPAYAM.

1. Kaaranam or Karta is the cause for the accomplishment of the action. (the physician) 2. The Karanam is the instrument, that which forms the means to achieve the action intended, i.e. the treatment. 3. Karyayoni is the material cause as the absence of harmony among doshas; it is the dosha vaishamyam (the derangement of the doshas) 4. Karyam is that object for achieving which the physician tries. It is Dhatu samyam i.e. the equilibrium of the Doshas. 5. Karyaphalam is the attainment of health (sukhavapti, or achievement of happiness.) 6. Anubandha is the continuity of life i.e. what follows the cure of the diseases. 7. Desa is the place of residence and the seat of disease i.e. the body of the patient. 8. Kala is time, age and the stage of disease 9. Parvriti is the taking up of treatment by the physician. 10. Upaya is the availability of facilities and proper aids, in the form of a proper physician, medicines, the nurse and curable disease for treatment and suitable environments, for securing success in the treatment. When all these conditions are available the result will be the restoration of health and a long life. A detailed study of these ten points should interest the investigator of diseases.

1. KAARANAM (THE PHYSICIAN):—The physician who administers medicines for curing ailments should be well-versed in his science. To him life is known in all its bearings. His object being bringing back the harmony of the Doshas (Dhatu Samyam). The physician should, at the outset, examine himself as regard to his own abilities to treat that particular disease, must be more so even in that particular stage considering the object before him; he should consider as to whether he will be able to achieve it. The qualities of a physician, who could bring about the harmony of Dosha (Dosha samyam) are as follows. 1. Clear knowledge of the scriptures, experience gained by actual observation of treatment; cleverness and skill, purity both external and internal; dexterity of hand gained by practice, equipment with all the necessary appliances of treatment of all the organs knowledge of the nature and capacity to deal with all the exigencies.

2. KARANAM (TREATMENT):—Karanam (instrument) again is medicine. That is, medicine, which serves as an appliance in the hands of the physician, while endeavouring to bring about harmony of Doshas (Dosha-samayam). It is distinguished from all those which have been included in the word Upaya. Broadly divided they are (a) Daivavyapasrayam, that which rests upon the grace or power of God or nature, now classified under Psychotherapy, and (b) Yuktiyapasrayam, that which rests on observation and reasoning. They

should be examined on the following points.

Nature, attributes, potency, growth in that region, season, mode of intake, and method of up keep. He will regard the facts like i whether it has been subjected to these processes, ii it is fraught with such a measure, iii it has been subjected to these in such a disease iv it is suitable to such a patient and it removes or allays such vitiated Doshas.

3. KARYAYONI:—Karyayoni is the causative factor and the onset i.e. the derangement of the Doshas. Its indication is the accession of an abnormal condition of the body or Dhatu. Its examination consists in an observation of the symptoms that indicate an increase or decrease of the sources of a disease. The examination of the abnormality also consists in an observation of such symptoms as indicate the curability, of the illness and its intensity.

4. KARYA - (EQUILIBRIUM OF THE DOSHAS):—Karya is the harmony of the Dhatus (Dhatu-samyam). Its indication is the alleviation of the vikara or the change. Its examination consists in an observation of the following: i. disappearance of the disease, ii. the accession of voice and complexion; iii. the growth of the body, iv. the increase of strength, v a desire for the usual articles of enjoyment (a) liking for food at the time of eating, (b) digestion at the proper time, (c) sleep at proper time, (d) disappearance of dreams due to abnormal condition, (e) happy awakening from slumber, (f) the free discharge of wind, urine, stool and semen, and (g) the complete disappearance of obstruction to the free action of mind and intellect.

5. KARYAPHALA - (RESULTING HAPPINESS):—The Karya Phalam or result of action is the attainment of

happiness. Its presentation is by cheerfulness of mind, intellect, senses and body.

6. ANUBANDHA - (CONTINUITY OF LIFE):—Anubandha is life. It is seen as the continuity of vital breath. The physician has to estimate whether as a result of the treatment, the patient has a chance of enjoying a happy life.

7. DESA - (HABITAT AND SEAT OF DISEASE):—Desa is the country or habitat of the patient including the patient's body. Amongst these, the examination of the country is for acquiring a knowledge of the habits of the patient, as also for the fixing up of drugs that grow in the locality. In this connection the following is useful for acquiring a knowledge of the patient. i In what region has the patient taken his birth, or has grown, or has caught the disease? For acquisition of an accurate knowledge of the drugs it is necessary to examine the soil. ii The patient is the Desa or field of investigation. His examination has for its object the ascertainment of the unexhausted period of his life or iii the ascertainment of the measure of his strength and of the doshas.

8. KALA (CLIMATE AND PERIOD OF DISEASE):—Kala is time. It is of two kinds viz. the year and the age of the patient. Amongst these, the year is divided into two or three or six or twelve parts and 365 days and six periods of four hours in each day. Kala also includes the day after the onset of the disease.

9. PRAVRITTI (COMMENCEMENT OF TREATMENT):—The commencement of treatment is called Pravritti. It is characterised by its combined action in a team of the physician, of the patient, of the medicine and of the attendant or nurse.

10. UPAYA (THE WAYS AND MEANS):—The suitability and adaptation of the physician and all the rest. Its characteristics consist in the administration of medicine, duly furnished with such a success as place, time, measure, assimilability and operation or virtue, as also the wealth of those attributes which have been already indicated.

In this way, the ten distinct particulars that require examination should be examined one after another, before judging the success or otherwise of the medical treatment.

CONCLUSION

Detailed discussion on these ten items may be enlarged into ten chapters and in fact, a whole book. A study of these facts will reveal the spirit of the subject. What is to be noted here is the methodical way in which the ancient Ayurvedic physicians studied these subjects of diagnosis and treatment as a whole and not in different compartments and how they attempted to study the man as a whole and not the different organs or the diseases that affect them as exclusively separate entities unconnected with the man as a whole. Rogipareeksha—the examination of the patient, is treated in Ayur-

veda as absolutely distinct from Roga-pareeksha, which means investigation of the disease. Examination of the physician here is not the one conducted by any University or other examining body but that self-examination which should be conducted by the physician on himself is not carried on by other Savants of medicine.

“Yadhavat sarwadhatusamyam Chi-keershan Aatmanameva aditah pariksheta”

Charaka. Vimana.

It means that the physician should first study his own capacity for undertaking the methods of treatment for bringing the Doshas to their normal condition in each case, so that once he decides on the curability of the case and his own capacity, he may proceed with a definite plan of treatment. This, the self-examination of the physician is another new idea, at any rate, to the modern scientist.

“The need for investigation of all the ten facts with the acquirements of a thorough knowledge of the means and methods of cure” is thus found to be important.

Pareeksha yastu Khalu prayojanam pratipatti Jnanam (Charaka Vimana)

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Diagnosis and treatment in Ayurveda

By

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VENKATESWARA AYURVEDA KALASALA

VIJAYAWADA

Owing to the various situations that India had undergone all through these long ages, the texts of Ayurveda now available are very concise, but it is also a fact that they are comprehensive in meaning.

The authenticity of the texts now available is questioned by some, but a majority of the Ayurvedists pay due respect to the books now in vogue. The originality of these books is denied by some extremists only, and that too, with reference to some portions. Though we can confine to the opinion of the majority and take the present books as authoritative, this difficulty does not arise at all with regard to the subject that I am now to deal with, since the portions relating to this subject are accepted by one and all

In Ayurveda, diagnosis and treatment are based up on the TRIDHATU (TRIDOSHA) theory, which, by its virtue, is invariably adaptable all through the ages, although her sister sciences are still in their experimental stages for want of appropriate fundamental principles. The medieval researches resulting in several new theories and new instruments are all having their good and bad. Yet they are gaining ground, partly because of the general clamour for what is modern, though the age old fundamentals of Ayurveda could not be over-thrown. On the other hand, it is a matter for great appreciation that

the fundamentals of Ayurveda are gradually regaining their ancient reputation and reverence. As the Tridosha theory is closely related to that of the Panchabhutas, which are the only authorised and all-accepted causes for the Universe (the animals, plants, minerals), the adaptability of the Tridosha theory without any change is possible. The Physician is given all facility in deciding the case, adapted by the Rishis who explain facts on the basis of the Tridosha theory. Sushruta dwells upon this point in his Kalpasthana.—“Pratyekamapyabhihite trividhya meva bhavati. Tasmāt trividhyameva asritya vakshyamaha. Etaddhi bhishagasam-mohakaram-atmahitamcha”.

An elaborate discussion on this subject is beyond the scope of this article. The methods prescribed for the examination of a patient are (i) Darsana, (ii) Sparsana and (iii) Prasna. Sushruta stresses upon the thorough examination with the aid of the Physician's five sense organs and interrogation, i.e. by seeing, hearing, touching, tasting, smelling and by a detailed questioning. The last method is more detailed than the former. Palpation, Percussion, Auscultation and similar methods of examination may be incorporated with advantage. One may say that the diseases are not explained so minutely as we find in text of western medicine.

The only answer is that the sages of Ayurveda had a very transparent in,

sight which excelled the limitations of these instruments. To help their followers, they directed them to be following the tide of time and accordingly to benefit their knowledge with the aid of the new advances. "Swabuddhya chapi vibhajet yantra karmani buddhiman", "Kritsonhi loko buddhimatam achar-yaha" etc., all these attest the above opinion. Whether the minute information available with the aid of these instruments is anywhere exhibited in the books or not can also be affirmatively answered. In heart diseases, Hridaya ayama (dilatation of the heart), Hridaya drava (palpitation of the heart), "sata-tam spandamanam" the over-vibrating organs, in Krimi nidanam "Sahaja krimayaha", "Soukshmyat kechida-darsanah" some will be invisible due to their minute size. All these terms and expressions, are simply given here as examples. Rishis envisaged all these fundamental factors long ago. But now a criticism is levelled against the Ayurvedic practitioners that they are lagging behind indidiagnosis for want of usage of these instruments. Having described details, what is the treatment suggested by ultra modernists for each minute detail? But providentially the Ayurvedist by his sound knowledge of the Nadi pariksha, which is one of the "ashta sthanas", and by the aid of the landmarks in diagnosis and in deciding prognosis of some diseases steal a march over others. When the diagnosis of a disease is carried out on the above lines and when the Nidana Panchaka is sought out, the knowledge about the diseases becomes complete. The Ashta sthana pariksha also comes under this heading.

Nidhana Panchaka consists of (i) Nidana (ii) Poorva Roopa, (iii) Roopa, (iv) Samprapti, and (v) Upasaya. Nidana is the cause of a disease. This cause described as varying from several stand-points. With reference to the time by

which the cause generates the disease and with reference to the potency of the cause, whether it generates the disease or not. Nidana is divided into four kinds, viz. (i) Sannikrishta, (ii) Viprakrishta, (iii) Vyabichari and (iv) Pradhana. Sannikrishta Nidana is immediate in its effect of causing the disease while Viprakrishta is contrary to this. Vyabichari may or may not cause a disease according to the circumstances, but Pradhana will positively cause the disease. "Asatmyendiyartha samyoga"—The body consists of eleven organs including the manas (the mind). Out of these, five belong to the sensory and five to that of the motor, while the mind belongs to both the varieties. Each of these organs have their own duties, through which the man (any living being) fulfils his needs of substance. When these organs are overworked, or when their work, is below normal, or when they are put to unusual work, it is termed as "Asatymendriartha samyoga."

Pragnaparadha means the defect of the intellect by which one's personal restraint is lost, he being induced to undertake wrong ways that bring about disease.

Parinama is said to, be climatic influence. Adharma also comes under this class as it also causes diseases after a lapse of time. This division is based upon the subjective and eternal nature of the cause. Some others divided it into three, namely Doshahetu, Vyadhihetu, and Ubhaya hetu. This is based on the action of the cause.

Again there is another division of the same into two, as Vyanjaka and Utpadaka. Vyanjaka is that which, as an agent, puts the already existing cause into work, and Utpadaka is that which actually causes the disease. In other words, these can be said to be the indirect and direct causes respectively

There are another two varieties of Nidana, viz. Bahya and Abhyantara, the external and internal causes. All these minute classifications go to show how keenly the Physicians tried to analyse the causes, since the treatment for the disease differed widely with the difference in the causation.

Under the Bahyahetu variety the Bacteriology, and under the Abhyantarahetu the deficiency diseases due to vitamin loss and the glandular deficiency can possibly be explained. It is not, unknown to the Ayurvedic scientists that Vata is the only predominating agent in and out of the body who is in charge of the working nature of the various organs. "Kartanechavachanam Bhavanam". So it can be inferred that the internal glands are influenced by Vata. Whenever we proceed to synthesis the western thought with that of the East, controversy is soon set up, as the detailed nature and procedure of the subject is not available.

Poorva Roopam:—The premonitory symptoms, and Roopam:—the symptoms of the disease, are very extensively described. The poorva roopa stage is quite useful in enabling the Physician to combat the disease very easily in its infancy.

The Roopam comprises of the subjective and general symptoms of the disease. The theory that a symptom will be at times a disease in itself and that sometimes it becomes part and parcel of the disease, is very useful for guidance in treatment.

Samprapti:—It is that which reveals the internal action of the doshas when they are in the act of producing a disease. It is nothing but mere amazement to the man of today to see how the sages of yore could envisage the internal sequences through their insight, and more so when they are today verified

with the aid of the modern appliances Samprapti is again divided into five varieties, Sankhya, Vikalpa, Pradhanya, Bala and Kala.

Upasaya:—In many confounding diseases, a trial treatment based on intuition is to be undertaken, which, if proved beneficial, will be termed as Upasaya, and if not beneficial as Anupasaya. This treatment is conveyed through three agencies, viz. (i) Bheshaja (medicine), (ii) Anna (food), and (iii) Vihara (air, sleep, cold, sun etc. general care). Again these three are divided into two branches, as Viparyastha and Viparyasthardhakari. Viparyastha means dissimilar and Viparyasthardhakari means similar. This shows that treatment of a disease with dissimilar medicines, food and general care, as also with its similar medicines etc., is in vogue in Ayurveda. In other words the principles of Allopathic and the Homeopathic theories are not foreign to the Ayurvedic system. But it is the present duty of the Research Scholar to differentiate the class of the Aushadha, Ahara and Vihara dictated in Ayurveda and enlighten the ordinary Physician. With the average knowledge in Homeopathy, one is amazed to see that so many drugs of Ayurveda are very commonly used for the same purpose in Homeopathy.

These two main divisions are again sub-divided into three each as (i) Hetu viparita, (ii) Vyadhi vipareeta, and (iii) Ubhaya viparita. and (i) Hetuvipareetakari, (ii) Vyadhi vipareetakari, and (iii) Ubhaya vipareetakari, and all these so minutely described come into eighteen varieties. To diagnose a case accordingly is a sure method, and none can go amiss.

The Ashtasthana Pariksha mentioned previously comes under the examination of the Roopam (combined with Samprapti). Nadi, Mootra, Mala, Jihwa,

Sabha, Sparsa, Roopa, and Netra are the eight sthanams to be examined. In the examination of Nadi and Mootra, there are some peculiarities which the modern science has not yet elicited. Though the texts of Ayurveda of old did not deal with the Nadi Pariksha, the same has been incorporated from the Yoga Sbastra, owing to its utility. The vibrations of the Nadi influenced by the three Doshas, individually, in doubles or in combination of all, with their special relationships with the part of day and night, meals, excretion, etc., are very minutely explained, and they are compared with the crawling, walking, jumping and other motions of various insects, animals etc.. The practitioner of this branch must be a very practical man with vast general knowledge or else he cannot grasp anything. Ideas about tension, rythm, regularity, etc., as now understood, are not missing explanation in the old theory though words and language used were different. It is a point for investigation if any corroboration is possible between the ancient methods described and the cardiographs and the photographs of the different living beings described now. But one thing is certain about the study of the pulse. A well versed physician in this can surly envisage the prognosis of a case very much better than the deduction arrived at by the help of the stethoscope, and other new mechanical devices of recent times.

As for the examination of the Mootra, the quantity, quality, frequency, the feeling of the subject while urination, etc., the physical test is mostly carried upon. The oil test is a mysterious one, but it will surely help the doctor in deciding the curability or the incurability of the disease. The figures that are formed when a drop of oil is placed in the urine, and the direction in which the drop of oil extends first, are the guiding factors

for this test. The chemical side of this test is not available in the current literature.

With the aid of all these methods individually and collectively, the diseases can be very minutely examined and diagnosed. To decide the curability or otherwise, and to decide the dangerous nature of the diseases, there are some important symptoms specially termed as Upadrava and Arishta. with the knowledge of which the Physician can easily get through and is not handicapped for want of the modern equipment. But a proper advantage of the modern equipment can now be taken to experiment and verify the theories available in Ayurveda and to show that they are quite up to the mark, just as the drug specialists have done recently.

TREATMENT.

Treatment is two-fold, (i) Dravyakritam, and (ii) Adravayakritam. The former is done with the aid of materials, i.e. drugs, food, etc.. Adravayakritam is that which is done without the help of these. Vihara, and Upavasa are the agents here. Naturopath comes under this. These two varieties belong to the Yuktivyapasraya branch.

Daivavyapasraya, Yuktivyapasraya, Satwavajaya, are the three divisions of treatment. Daivavyapasraya is the method of treating diseases through worships of Gods. through offerings chanting hymns etc., relating to the spiritual branch of science. Yuktivyapasraya is described above. Satwavajaya means control of mind. It is the psychological branch of treatment.

Yuktivyapasraya:—The various treatments administered for the various diseases result in either improving the the flesh and bone, or decreasing the fat and the undigested and unuseful substances. That is they come under Brimhanam or Langhanam.

Of these two, Langhanam is further divided into two, (i) Sodhanam and (ii) Samanam. Again these are divided into five and seven varieties each respectively.

Sodhanam is the process of elimination of foreign matters and accumulations dangerous to the body, through the mouth, anus, nose etc. Samanam is to absorb and bring the disturbances into a quiet condition without their expulsion. In sodhanam, the five branches are (i) Vamana, (ii) Virechana, (iii) Vasti, (iv) Anuvasana, (v) Nasya. The seven factors of Samana are (i) Deepana (ii) Pachana, (iii) Kshut (iv) Trishna, (v) Vyayama, (iv) Atapa (sunbath), and (vii) Maruta. Sodhana is intended where the disease is superfluous and the body is able to withstand the strain of the same (sodhana). Before proceeding to Sodhana, the patient should be subjected to Sneha and Sweda by which the Malas come into a position.

Vamana is to be practised in the aggravated condition of Kapha, Virechana in that of Pitta, and Vasti in that of Vayu. Various drugs are recommended according to the difference of Koshta and in very dangerous conditions also, these methods offer the best chance for recovery.

About Vasti, Ayurveda extols much and is estimated to be the complete method of treatment or at least the half. The peculiarity with this when compared with the modern enema, is that it has the advantage of medicating the system with various Kashayas and medicated oils. This offers very many laudable results in very chronic diseases which baffle modern medicine.

The methods for the practical application of these panchakarmas as they are popularly called are very much amplified in the text and they deserve special attention. The description of Pancha Karmas was different. Instead of

Anuvasana, Raktamoskshana or veni-section is incorporated in the Pancha Karmas. Thus Veni-Section is not a new innovation. It is highly deplorable that the average Physician, whether Indian or Western out of his ignorance of this methods, is doing much injustice and disservice to the art and science of Ayurveda. The modern methods may be supplemented as and where necessary.

Nasya is the method of administering medicated oils, powders etc., through the nose, which is very useful in the diseases of the Ear, Nose, Eyes, Brain, and in general diseases where Brain and nervous system is involved. In the dire disease, the Tetanus, Nasya Karma is chiefly recommended. Gandusha (gargling), Dhumapana (fumigation and smoking), Anjana (Collyrium), Kshara (caustics), Agni karma (scorching) are also adjuncts to these methods. As Agni is divided into four varieties in logic in which electricity is one, by Agnikarma the Radiotherapy can be included. Although the common meaning of the text goes by scorching with the aid of the ordinary fire, refined methods are not to be refused. The particular places of the body where Agni is to be applied deserve particular attention.

The seven methods of Samana are very useful in the unaggravated conditions and they can be safely resorted to. As regards Sodhana proper care in applying is necessary.

Ayurveda did not ignore that blood also is a chief agent in causing diseases especially when they have an external cause? In such cases, special care to combat the external causes, and to treat the condition of blood is chiefly recommended. The primary and secondary nature of the disease also is of much consideration when treating them as that causes much difference.

SADAPA

A DRUG USEFUL IN THE DISEASES OF CHILDREN

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RAMALINGESWARPET, TENALI

Ruta Graveolens (R. Angustifolia)

Eng: The Garden Rue, Sans: Sadapa
Hind: Pers: Arab: and Guzar: Satap,
Beng: Ispand, Tel: Sadapa Can: Sada-
pugida.

It is a plant belonging to genus
Rutacace, and is a short tender fragrant
herb.

This drug is used as a house-hold
remedy for children's ailments.

Description: Leaves pertioled, de
compound; segments cuerate, spatulate
oblong or linear-oblong. Flowers in
divaricately spreading corymbs; pedicles
longer than the capsule; bracts lanceolate.
Sepals triangular, adnate petals oblong-
obovate, pectinate, abruptly clawed.
Capsules obtuse, shortly pedicelled.
Seeds angled.

Distribution: Cultivated throughout
India Westwards to the Canaries.

Action: It stimulant, expector-
ant, anti-spasmodic and anthel mintic
in infants and children. It is also
said to be a valuable restorative,
diurietic and emmenagogue.

Therapeutic uses:

According to Ayurveda the plant has
Tikta, Rasa Laghu and Tiksna Guna,
Ushna Veerya Katu Vipaka laxative,

heating to the body, removes Kapha
and Vata.

According to Siddha System the
drug is said to possess Tikta (bitter) and
Katu (Pungent) taste. It has Ushna
Veeryam and Katu vipakam. It is
useful in diseases like Dysmenorrhoea and
allied uterine disorders, improves diges-
tion and acts well in chronic bronchitis,
stomach disorders and worms.

In children it corrects the digestion
and relieves infantile convulsions and
fever.

The dried leaf is used for fumigating
the patients' rooms to relieve cold cough
and throat troubles. Some Siddha
physicians are of opinion that the leaf
juice orally given stimulates uterine
contractions during labour.

An oil is prepared with the worm
usually found on the plant with a
quarter palam of Ajamoda, and 5 palams
of gingly oil, kept in sun-light (Soorya-
putam) till the worm is dissolved in it,
and is used in peenasam.

According to Unani the plant is a tonic
digestive, diuretic, emmenagogue, aborti-
ficient antiaphrodisiac, heats the body,
increases mental activity, and useful in
gleet and urinary discharges. When fresh,
its topical action is acid. If handled much

it produces redness, swelling and even
vesication. Kirthikar and Basu recom-
mended that it may be given internally
in amenorrhoea, epilepsy, flatulent colic,
etc, and externally as a rubefacient.
They opine that the oil is the best form
of administration but rue tea (decoction)
is a popular remedy.

In Bronchitis and Pneumonia the
juice of the drug is given in 10 to
30 drops doses mixed with honey. In
cold and cough in Children fresh
juice of the leaves of this and the leaves
of Tulasi are given with honey. Fresh
juice is more effective than in any other
form. A decoction of the dried leaves
(when fresh leaves are not available)
may be used for Children in stead. The
leaves may be used for fumigations in
nasal catarrh and cough in young child-
ren. The powders of the dried leaves
of Sadapa, black pepper and cardom-
mom seeds mixed in equal quantities
and used act as a carminative and it is
a remedy for dyspepsia. Dose 2 to 5
grains.

The herb and the oil act as stimu-
lants, chiefly to the uterus and nervous
system. Rue in all its forms is consi-
dered injurious to pregnant women.

A tincture made with fresh leaves is
used as an external remedy in the first
stage of paralysis. In Punjab, the
leaves are used as a remedy for rheumatic
pains. In the Central Provinces the
leaves are pounded with salt and applied

SADAPA

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locally for scorpion sting, though Caius
and Mhasker declare it to be useless.

Rue is used by Arabs in Palestine and
Syria as a preventive for the ill effects of
water drunk from unaccustomed springs;
they either chew the leaves, or soak the
plant in water and drink that water
(Fullerton)

The plant is used as an emmenagogue
in Indo China and the seeds are consi-
dered a good ascariocide in Annam. The
Chuanas and Kwenas administara decoc-
tion in large doses to ease childbirth.

In transval a syrup made with the
infusion of the leaf is used for cardiac
asthma and the bruised leaf is given
in jaundice and infantile diarrhoea.
Commercial oil of rue does not appear
to be effective as an anthelmintic. The
higher boiling fraction acts as a fairly
potent vermicide to hookworms, but is
ineffective for removal of ascarids (Caius
and Mhaskar.)

This plant has strong antispasmo-
dic properties; the juice is generally
prescribed on the West Coast in
convulsions of Children. in acute
bronchitis and pneumonia. The juice
undoubtedly possesses antispasmodic
and expectorant properties. I have
found it useful in bronchial catarrh and
acute bronchitis of children (Koman).

A light decoction of the dried leaves
of the drug may be used as an enema in
flatulence and colic. The decoction

may be given orally, too, in these cases. Fresh leaves are ground well, and made into a paste, mixed with a little brandy and applied externally relieves nervous pains (Nadkarni.) An infusion of this drug is used for respiratory and hears diseases.

When given orally it is considered by house-holders, as a substitute for musk to maintain the bodily temperature.

The drug is added to water, poured into a still and condensed vapour extracted by distillation, just as rose water or omam water and it is freely used for children and youngsters as a carminative and stimulant. During distillation, the drug yields a small quantity of a volatile oil.

It is generally used in cases of hysteria in combination with the powders of Jatamamsi and Aswagandha. The powders of the above three drugs are mixed in equal quantities and given with water, milk or honey. (dose 10 to 20 grains.) A tincture prepared with this by adding the pieces of this plant to rectified spirit and kept for over a fortnight and filtered can be used internally as an expectorant and carminative (dose 1 to 5 drops for children.) It can also be applied externally on inflamed areas. An asavam can be made with the fresh juice of the plant and

pure honey in equal quantities mixed and kept undisturbed for one month and then filtered and taken. Dose $\frac{1}{4}$ to 1 teaspoonful.

In South Africa the decoction of the leaves is used in fevers. In fits and convulsions of infants and children the leaf juice is given.

The fresh leaf crushed into a soft paste and placed in the hollow of the aching tooth. In earache too if the mass of the bruised drug is placed in meatus of the ear, it gives relief

Some times, when in extremis, children are bathed in a decoction of the plant; and this is credited with producing recovery (Basu and Kirtikar.)

This drug deserves special study and Pharmacological investigation in view of its highly useful nature, specially in children.

References:

1. Indian Materia Medica by Nadkarni.
2. Indian medicinal plants by Basu and Kirtikar.
3. Vastuguna Deepika.
4. Guna Patham

SIMPLE PRESCRIPTIONS

ADAPTED FROM THE HYGIENE AND HOME REMEDIES

By

AYUREDACHARYA DR. M. VISWESWARA SASTRY H.P.I.M.

ASTHMA:

R/ Vasambu

- (1) (Vacha) Powder - 5 grs. three times a day with honey.
- (1) Adatodai-Vasa - Infusion 2 ozs. three times a day.
- (3) Adatodai-dried leaves used in smoking as Cigarettes.
- (4) Tippalee-(Pippalee) 5 Grs. Fried and Powdered and given three times a day.

ASTHMATIC SPASM:

R/ Atimathuram (Yashti Madhu) 
Infusion of the root 1 oz 2 ozs. three times a day.

ABSCESS:

R/ Linseed-(Atasibeejam) $\frac{1}{4}$ to $\frac{1}{2}$ tola
A poultice of this when applied adding a little castor oil hastens suppuration and opening.

BURNING MICTURITION:

R/ Vendakkai-(Gojihwa)
(Tender fruit ripe seeds or capsules) make decoction.
Dose—1 to 2 ozs. three times a day.

BLEEDING PILES:

R/ Vengayam (Palandu) 1 bulb
The bulb cooked in water or baked by putting on fire and taken arrests bleeding in piles.

BLEEDING PER NOSE:

R/ Vengayam (Palandu)
Fresh juice-2 or 5 drops dropped into the nose.

BILLIOUSNESS:

R/ Injee-(Ardrakam)

Seerakam (Jeerakam) equal quantities. Extract fresh juice with water $\frac{1}{4}$ to 1 oz. with equal quantity of honey.

R/ Fresh ginger pieces 1 palam to be fried in ghee (1 Palam) sugar-4 palams. Made into a confection. Dose 5 to 15 grs. two times a day.

R/ Cloves } each 5 grains mixed and
Cardammam } given with 1 teaspoonful of honey.

BLEEDING GUM:

R/ Lodhrapattai-(Lodhra)
Decoction used for gargling 2 ozs.

BURNING SENSATION:

R/ Chandanam-(Chandana)
A paste can be applied over the part.
R/ Marutonri-(Kuravaka)
A paste of the leaves mixed with lime juice applied to the feet relieves burning sensation (in the feet.)

BURNS:

R/- (1) Nai, (Ghritham)
to be applied over the affected part q. s.
(2) Honey (Madhu) Thane. To be applied over the part.

BRUISES:

R/ Mangat injee (Karpooa ardrakam)
A paste to applied over the area,

BOILS:

R/ Poduthalai (Vashira)
A part of the plant applied to the
boil hastens suppuration.

BRONCHITIS (ACUTE):

R/ Nirbrahmi (Jalabrahmi) Sambrani
Elai
The leaves fried and used for mild
fomentation of the chest.

R/ Seemai Agathi (Dadrughna)
A decoction of the leaves 1 oz to
2 ozs two times a day.

COUGH:

R/ Mungil Uppu
Tugaksheeri 5 to 10 grs.
Atimadhuram-(Yashtimadhu 5 to 10
grs. with honey relieves irritat-
ing cough.

R/ Seerakam-(Jeerakam)
Decoction 1 oz. to 2 ozs with sugar
1 teaspoonful two or three times
a day.

R/ Atimadhuram-(Yashti Madhuka)
Infusion 1 oz to 2 ozs.
A piece of the root can be chewed.

R/ Thumbai-(Dronapushpi)
The juice of the flower with honey
1 teaspoonful for children once
in a day.

COUGH (IRRITATING):

R/ Lavangam } equal parts. 5 to 10 grs.
Valmilagu } with honey two times a
day.

COUGH:

R/ Nagavalli (Vettilai) $\frac{1}{2}$ to $\frac{1}{2}$ oz.
The juice of the leaves with one
teaspoonful of honey

R/ Nattutakarai (Kasamardam)
Powdered seeds 10 to 20 grs.
with honey. Powdered leaves
10 grs. to 30 grs. with honey
three times a day.

R/ Thanikkai (Vibheetaki)
Thanikkai Powder —5 grs.

Long Pepper —5 grs.
Salt —5 grs.

to be taken with hot water, two
times a day.

R/ Adatodai (Vasa)
Fresh juice 1 to 2 ozs with $\frac{1}{2}$ of
honey.

R/ Tippalee (Pippalee)
Fried and powdered fruit 5 grs.
with honey, reduced to 1 oz.
Infusion of long pepper 2 fruits
in 4 ozs. of water reduced to 1
oz. with a teaspoonful of honey
is a good expectorant.

COUGH IN CHILDREN:

R/ Nochi (Nirgundi)
Infusion of leaves 1 teaspoonful with
honey.

R/ Tulasi. The juice of the leaf.
1 teaspoonful with honey relieves
cough and cold.

COUGH AND COLD:

R/ Linseed (Atasibeejam)
Infusion (1 in 32) 1 oz. with sugar
reduced to 1/8.

CONSTIPATION:

R/ Karuveppalai (Surabhi nimba)
Decoction of the leaves 1 oz. to
oz.

R/ Sivadaiver (Trivrtth)
Powder of the root 30 to 60 grs.
with sugar, honey or water.
Decoction of the root 2 ozs. with
sugar.

COLIC:

R/ Milagu (Maricham)
Milagu Powder 5 grs. each one
Salt 5 grs. dose three
times a day.

DIARRHOEA:

R/ Omam (Ajamoda)
Decoction of Omam 1 to 2 ozs. three
times a day.

R/ Pugam (Fruit)
Powder of Pakku 5 grs. with butter
milk 4 ozs.

CONSTIPATION:

R/ Pungam-Karanjam
The tender leaves fried in ghee mixed
with nellu pori (Lajam) gives a
good motion

R/ Amanakku (Erاندam)
A decoction of the root 1 oz to 3 ozs
The oil of the seeds of Ama $\frac{1}{2}$ to
1 oz with hot water.

R/ Roja (Rose)
The buds fried in castor oil and
made into a Chatney with Tama-
rind and Ginger may be taken
with food.

R/ Rose bud powder 1 teaspoonful.
Trivrtth powder 1 teaspoonful
with hot water,

R/ Sarakonnai (Aragvadham)
A decoction of the pulp of the fruit
1 to 2 ozs.

R/ Saptala (Cheekai leaves.)
Puli (Tintrini fruit) make a decoction
of these two, to 2 ozs.

R/ Decoction senna and rose buds.
Make into a syrup with sugar 1 to
2 ozs.

R/ Kadukkai at Powder 10 grs.
Trivrtth 20 grs.
Sugar 10 grs.
One dose at bed time.

CONSTIPATION IN CHILDREN:

R/ Take a big and heavy Kadukkai and
rub it on a stone with water. 5 grs.
of that paste with milk in
mornings one dose.

CHRONIC BRONCHITIS:

R/ Adatodai (Vasa)
Infusion 2 ozs per dose. two or three
times a day.

CHRONIC ULCERS:

R/ Karungali pattai
(Khadira twak) make a paste by
rubbing it on a stone with equal
quantity of butter and use for
external application.

CHOLERA:

R/ Pachakarpooram 3 grs,
Oman 10 grs.
Katajabeejam 10 grs,
with hotwater. 2 or 3 times a day
Powder all the three and mix.

DIARRHOEA(Contd):

R/ Vendayam (Methika)
Prepare decoction 1 to 2 ozs.
R/ Karuvelam Pattai (Babbula Twak)
Prepare Decoction.
Dose 1 oz with a little sugar or
honey

DIARRHOEA:

R/ Ala Mara Pattai (Vatam)
A decoction 1 to 2 ozs.

DIARRHOEA (IN CHILDREN):

R/ Ativitayam-(Ativisha)
Powder 3 to 5 grs. a dose
Infants 2 to 3 grs. a dose three times
daily with honey.

R/ Kutajappalai-(Kutajam)
A decoction of the bark 1 oz
to 2 ozs.

R/ Kasakas-(Khaskhasbeejam)
Fried powder of the seed either
alone or with butter milk dose
morsal of food.

DYSMENORRHOEA:

R/ MUNGIL-Vasam)
Infusion of leaves 1 to 3 ozs. three
times day.

DROPSY:

R/ Mukkarattai-(Punarnava)
Fresh Juice $\frac{1}{2}$ oz.
Punarnava 2 ozs. Prepare Kashayam
2 or 3 times a day.

R/ Vellari-(Trapusam)
Decoction of seeds made into a syrup
with sugar 1 oz. 2 or three times
a day.

R/ Peerkan-(Koshataki)
Infusion of the ripe fruit 1 oz. to
2 ozs.

DYSPEPSIA:

R/ Elumacham-(Jambeeram)
The juice prepared into a syrup with
ginger juice, and sugar 1 tea-
spoonful three times a day.

R/ Induppu-(Saindhavam)
Powder 5 grs. with a piece of ginger
crushed, together and taken
enhances appetite.

R/ Vasambu-(Vacha)
Decoction 1 oz.
Vendayam (Methika)

DIABETES:

R/ Karungali pattai:
Khadira twak decoction 1 oz to
2 ozs.

R/ Nellikkai-(Amalaki.)
Fresh juice 1 oz per dose.

R/ Manjal (Nisa)
Powder x gr. with (Gudoochi)
Chiddal Kodi juice 1 oz.

DIABETES:

R/ Avarai-(Talpotakam)
A decoction of the flower 1 oz. to

R/ Kovai-(Bimba)
Fresh juice of root 1 oz.

DYSENTERY:

R/ The Pinjee Kadukkai.
(Bala Harithaki) powder 5 to 10 grs.
with hot water in early stages.

R/ Kutajappalai (Kutajam)
A decoction of the bark 1 oz to 2
ozs. with sugar.

R/ Jatukkai-(Jateephalam) gr. 5.
Seerakam 5 grs.
Lavanga Pattai 5 grs. powder and

mix one dose with water or butter
milk in later stages.

R/ Lavangatwak-Lavanga Pattai 5 grs.
Kutajabeejam Kutajappalai gr. 5
Jeerakam-Seerakam gr. 5 One dose.

R/ Moru-(Takram) 4 to 6 ozs.
with turmeric powder 10 to 15 grs.
twice or thrice a day.

DEMENTIA:

R/ Vallarai (Brahmi)
1. Fresh juice $\frac{1}{2}$ to 1 oz with sugar
two times.

2. Ghee prepared with the above
juice 1 teaspoonful a dose two
times a day.

DEBILITY:

R/ Thenu-(Madhu)
Madhu 1 oz.
Ghee $\frac{1}{2}$ oz.
Milk 4 ozs.
A nutritive tonic. Twice daily.

R/ Nellikkai-(Amalaki)
Fresh juice of the fruit $\frac{1}{2}$ oz.
1 teaspoonful quickly restores
strength.

EAR ACHE:

R/ Velai (Ajagandha)
The juice of the leaves, 5 drops
dropped into the ear.

R/ Kuppameni-(Marjara Mohini)
6 drops of fresh juice dropped into
the ear relieves ear ache.

R/ Vellapundu-(Lasunam)
Fresh juice 1 oz.
Castor oil 4 ozs. boiled and cooled
to be used as drops into the ear.
5 drops twice a day.

ENLARGEMENT OF SPLEEN:

R/ Peerakkan-(Kosataki)
The leaves are fried and applied
externally over the area.

ELONGATED UVULA:

R/ Vellapundu (Lasunam)
The fresh juice is applied to the tip
of the elongated uvula.

FEVER WITH BURNING SENSATION:

R/ Vetti veru (Useeram)
Nannari (Sariba)

R/ Infusion 1 oz to 2 ozs
three times a day.

R/ Seerakam (Jeerakam)
Grind with water. Extract the juice
1 oz with sugar.

R/ Sombu (Madhrika)
Decoction of the fruit 1 oz to 2 oz.

FLATULANCE:

R/ Perungayam (Hingu)
Fried and powdered 5 grs. with
common salt 5 grs. without water
two times a day.

R/ Saptala (Cheekai leaves)
Decoction 1 oz to 2 ozs.

2. Vasambu (Vacha)
Decoction 1 oz.

3. Vendayam (Methika)
Decoction of fried seeds 1 oz to
2 ozs.

4. Sukku Sonti Powdered
Gr. XV. Common Salt. Gr. XV.

FEVERS:

R/ Saptala (Cheekai Leaves)
Decoction 1 oz to 2 ozs.

FEVER (INTERMITTANT):

R/ Tulasi The infusions of the leaves
1 oz to 2 ozs. to be given.

R/ Milagu (Maricham)
Decoction of Black Pepper.
1 oz to 2 ozs.

Sugar 1 teaspoonful relieves cold
and fever.

FAINTING:

R/ Vengayam (Palandu.)
Fresh juice 2 to 6 drops into the
nose.

GENERAL DEBILITY:

R/ Tanikkai Powder (Vibheetaki)
5 grs. per dose with honey.
Taken every day improves health

GIDDINESS:

R/ Nellikkai (Amalaki)
A paste of the fruit applied over the
head relieves giddiness, prefer-
ably after applying oil.

CONNORRHOEA:

R/ Chandanam (Chandana)
Decoction of the wood 2 ozs three
times a day.

R/ Sandalwood oil 1 to 3 drops in
plantain fruit.

R/ Sandalwood paste 5 to 10 grs.
with sugar to be administered
internally.

R/ Vellari (Trapusam)
A decoction of the seed made into
a syrup with sugar 1 oz 2 dose.
Brings about free urination.

R/ Alamarapattai (Vatam)
Decoction used for douching.

R/ Arasampattai (Pippala)
Infusion 1 oz. to 2 ozs.

R/ A decoction of Vendakkai (Gojihwa)
ripe seeds tender fruits or capsules)
Dose 1 to 2 ozs. t. d. s.

R/ Kattalai (Kumari)
Pulp of the leaves 1 tola.
Sugar 1 tola. taken internally,

GUINEA WORM:

R/ Seethaphalam (Subha)
A paste of the leaves applied exter-
nally as useful in extracting the
worm.

HAEMOPTYSIS:

R/ Adatodai (Vasa)
Fresh juice 1 oz. to 2 ozs.
Honey 1 ozs, three times a day.

HEADACHE:

R/ Nellikkai (Amalaki)
A paste of the fruit applied over
the head relieves headache, due
to excess of heat.

R/ Valmilagu (Lankesam)
A paste of the fruit applied over the

head relieves headache, due to excess of heat.

R/ Valmilagu (Lankesam)
The powder mixed with rose water to be applied as a paste on the fore head.

R/ Marutonri (Kuravaka)
The juice of the plant boiled with gingely oil applied to the head.

R/ Agathi (Agastya)
The juice of leaves and flowers dropped in the nose relieves headache due to excess of cold.

HEAD ACHE :

R/ A past or dried sukku (Sonti) over the temple of the head.

HEADACHE DUE TO COLD:

R/ Kunkumapuvu-(Kukumam)
A paste of 2 grs. of this is applied over the head.
Sandalwood paste with camphor applied over the temple.

HEARTWEAKNESS:

R/ (Kasturi)
Kasturi 2 grs.
Pachakarpooram 2 grs. t.d.s with honey.

R/ Draksha-An infusion to 2 ozs.

HEART-TONIC :

R/ Amukkuram Kilangu (Aswagandha)
Powdered 10 grs.
Marudam-(Arjuna) Pattai.
Powdered 10 grs. with honey or
Decoction of the bark 2 ozs b.d.

R/ Karbograsi-(Avalguja)
The seeds bruised and boiled in oil (gingely or copoanut) to be applied to the hair.

HOARSENESS OF VOICE:

R/ Tippalee (Pippalee)
Fried and powdered fruit 5 grs. with honey.

HAEMORRHAGE:

R/ Komparakku-(Laksha)
Powder 5 grs. to 15 grs. sugar, butter, ghee or honey.

R/ Pushanikai-(Kushmandam)
Syrup prepared with the fresh juice and sugar $\frac{1}{2}$ oz. a dose relieves haemorrhage.

R/ Adatodai-(Vasa)
Fresh juice 1 oz. to 2 ozs. Honey 1 oz. t.d.s.

HAEMORRHAGE IN VIPER SNAKE POISONING:

R/ Jaji Malli - (Jati)
The fresh juice of the leaves dropped into the nose - 5 drops.

EXCESS OF HEAT:

R/ Kushmanda - (Pushani)
Fresh juice $\frac{1}{2}$ to 1 oz.
Sugar 1 teaspoonful. (Cooling.)

HYSTERIA:

R/ Nattu Takarai - (Kāsamardam)
A decoction of the root flowers and leaves 2 ozs. relieves spasma.

IMPURITIES OF BLOOD:

R/ Karungali pattai (Khadhira Twak)
Decoction 1 oz. to 2 ozs. t. d. s.

INSECT-BITE.

R/ Sirukadaladi (Apamargam)
A paste made of the leaves of this and a little opium mixed and applied.

INDIGESTION IN CHILDREN:

R/ Kadukkai (Hareethaki.)
A well grown fruit rubbed on a stone 3 to 6 grs. weight with water and given in milk.

IRRITATING COUGH:

R/ Kadukkai - (Harithaki.)
Kadukkai powder 10 grs.
Dried Ginger powder 5 grs.
Salt powder 5 grs.
One dose followed by hot water two or three times.

INDIGESTION AND STOMACHACHE:

R/ Omam - (Ajamoda)
Ajamoda powder 10 grs.
Common Salt 10 grs.
One dose taken with hot water.

R/ Kothamilli - (Dhanyakam)
Decoction of the seed with the powders of black pepper and dry ginger 5 grs. each to 1 oz. to 3 ozs.

INDIGESTION:

R/ Milagu - (Maricham) Gr. 5.
Black pepper 5 grs.
Seerakam 10 Grs.
Lauised and ground with water. filtered dose 1 oz two times.

INTERMITTANT FEVER :

R/ Seendal Kodi (Guduchi.)
1. Juice of fresh leaves 1 to 2 ozs.
2. Juice of fresh root 1 oz to 2 ozs.

INFLAMMATIONS:

R/ Vellapundu (Lasunam)
The bulb fried in castor oil and used for fomentation over the inflamed areas.

R/ Kathalai (Kumari)
The pulp heated and applied.

INFLAMMATORY SWELLINGS :

R/ Nai-Ghrtham.
To be applied over the part q. s.

R/ Vellaijungilam (Sarjarasam)
Boiled with any oil and applied over relieves pain and swellings. This can be used as a massing oil in Chronic joined affections.

LEUCORRHOEA :

R/ Lodhra Pattai (Lodhra)
Decoction 1 oz. to 2 ozs.

R/ Alamarapattai (Vatam)
A decoction can be used for douching.

R/ Vendakkai (Gojihwa)
A decoction of vendakkai tender.

KAPHAM :

Thenu (Madhu)
Betel leaf juice $\frac{1}{2}$ oz.
A good expectorant and Carmi-native.

LEPROSY :

R/ Karungali pattai (Khadira twak)
Decoction 1 oz. to 2 ozs.

LOSS OF APETITE :

R/ Vendayam (Methika)
A decoction of fried seeds 1 to 2 ozs. two times a day.

R/ Powder of dried sukku
Sonti 5 grs.
Salt 5 grs.

Used with the first morsel of food with ghee. two times a day.

MENORRHAGIA :

R/ Lodhrapattai (Lodhra)
Decoction 1 oz. to 2 ozs. t. d. s.

R/ Alamarapattai (Vatam)
A decoction used for douching.

R/ Mampattai (Choota)
The juice of the bark 1 oz. with sugar.

MALARIA :

R/ Nilavembu (Kirata)
Decoction 1 oz. to 2 ozs. per dose t. d. s.

R/ Powder of Nilavembu x grs.
per dose with honey three times or hot water b. d.

R/ Chinchona bark
Powder 10 grs. in honey b. d. or t. d. s.

INDIGESTION AND STOMACHACHE:

- R/ Omam - (Ajamoda)
Ajamoda powder 10 grs.
Common Salt 10 grs.
One dose taken with hot water.
- R/ Kothamilli - (Dhanyakam)
Decoction of the seed with the
powders of black pepper and dry
giger 5 grs. each to 1 oz. to 3 ozs.

INDIGESTION:

- R/ Milagu - (Maricham) Gr. 5.
Black pepper 5 grs.
Seerakam 10 Grs.
Lauised and ground with water.
filtered dose 1 oz two times.

INTERMITTANT FEVER :

- R/ Seendal Kodi (Guduchi.)
1. Juice of fresh leaves 1 to 2 ozs.
2. Juice of fresh root 1 oz to 2 ozs.

INFLAMMATIONS:

- R/ Vellapundu (Lasunam)
The bulb fried in castor oil and used
for fomentation over the inflam-
med areas.
- R/ Kathalai (Kumari)
The pulp heated and applied.

INFLAMMATORY SWELLINGS :

- R/ Nai-Ghrtham.
To be applied over the part q. s.
- R/ Vellaijungiliam (Sarjarasam)
Boiled with any oil and applied
over relieves pain and swellings.
This can be used as a massing
oil in Chronic joined affections.

LEUCORRHOEA :

- R/ Lodhra Pattai (Lodhra)
Decoction 1 oz. to 2 ozs.
- R/ Alamara Pattai (Vatam)
A decoction can be used for dou-
ching.

- R/ Vendakkai (Gojihwa)
A decoction of vendakkai tender.

KAPHAM :

- Thenu (Madhu)
Betel leaf juice $\frac{1}{2}$ oz.
A good expectorant and Carmi-
native.

LEPROSY :

- R/ Karungali pattai (Khadira twak)
Decoction 1 oz. to 2 ozs.

LOSS OF APETITE :

- R/ Vendayam (Methika)
A decoction of fried seeds 1 to 2 ozs.
two times a day.

- R/ Powder of dried sukku
Sonti 5 grs.
Salt 5 grs.

Used with the first marsal of food
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- R/ Lodhrapattai (Lodhra)
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- R/ Alamarapattai (Vatam)
A decoction used for douching.
- R/ Mampattai (Choota)
The juice of the bark 1 oz. with
sugar.

MALARIA :

- R/ Nilavembu (Kirata)
Decoction 1 oz. to 2 ozs. per dose
t. d. s.
- R/ Powder of Nilavembu x grs.
per dose with honey three times or
hot water b. d.
- R/ Chinchona bark
Powder 10 grs. in honey b. d. or
t. d. s.

MENSTRUATION (IRREGULAR) :

R/ Karumseerakam
Powder 5 to 10 grs. with honey.
regulates menstrual flow.

R/ Ellu (Thilam)
a powder of fried thilam 2 tolas
jaggery (quantity sufficient to
make three doses taken internally
helps regular flow of menses.

NEURALOGIC PAINS :

R/ Nochi Nirgundi
The juice of leaves and gingelly oil
are boiled together and oil ex-
tracted. This oil is applied ex-
ternally.

MAMMARY ABSCESS:

R/ Pachapiru (Mudgam)
A paste of this is warmed and
applied externally.

NASAL BLOKAGE IN COLD AND CATARECH :

R/ Karum seerakam (Krishna Jeerakam)
Bruised powder tied in a cloth and
smelt, relieves the nasal blocking.

OBESITY :

R/ Thenu (Madhu)
 $\frac{1}{2}$ oz. to 1 oz.
Cold Water 2 ozs.
Mixed with and taken in early
morning.

PAIN RHEUMATIC AND OTHERS :

R/ Vasambu (Vacha)
Rubbed with viniger and applied,
externally over painful area.

PAIN (GENERAL) :

R/ Ellu Ennai (Thilam)
The oil of Thilam q. s. applied
externally and fomented with hot
water.

PARTURITION :

R/ (Kasturi)
Kasturi 2 to 3 grs.
One dose as a stimulant imme-
diately after delivery.

PAINFUL SWELLINGS:

R/ Sambrani (Karpuram) ground to-
gether with cocoanut oil and applied
externally relieves pain and
swelling.

PILES (INTERNAL):

R/ Poduthalai (Vashiar)
A chatney of the leaves relieves
irritation due to piles.

POISON:

R/ Pungam (Karanjam)
The seeds are antidote 5 to 15 grs.
for all poisons generally used both
internally and externally as well
as by nose nasyam and eye as
anjanam.

RINGWORM:

R/ Tulasi-the paste of the leaves with
lime juice is applied over the
patches.

RHEUMATISM (PAIN):

R/ Kadugu Ennai (Sarshapa Thailam)
 $\frac{1}{2}$ oz. Gingely Oil $\frac{1}{2}$ oz. Camphor 5
to 10 grs. For external appli-
cation.

R/ Punnai Ennai (Punaga Thailam)
The oil of Punnai is used for exter-
nal application.

R/ Ulundu (Masham)
Gingely oil boiled with this with a
small quantity of rock salt-to be
applied externally.

ROUND WORMS:

R/ Velai (Ajagandha)
The powder of the seeds 10 to 30
grs. expells round worm.

DENAL DROPSY:

R/ Sirakadaladi (Apamargam)
Decoction 1 to 2 ozs per dose.

RETENTION OF URINE:

R/ Nerinjil (Gokshuram)
A decoction of the root 1 to 2 ozs.
produces diuresis.

SPERMATORRHOEA:

R/ Vendakkai (Gojihwa)
A decoction of vendakkai (tender
fruits, ripe seeds and capsules)
Dose-1 to 2 ozs. three times a
day.

STOMATITIS:

R/ Karungali pattai (Khadira Twak)
Decoction for gargling.

SLEEPLESSNESS:

R/ Ammukkaram (Aswagandha)
Powder 10 to 15 grs. with milk and
sugar.

R/ Erumai Pal (Mahisha Ksheeram)
1 to 2 ozs. Boiled and taken with
a little sugar.

STERILITY:

R/ Asoka pattai
Decoction 1 oz. to 2ozs. three times
a day with sugar or honey.

SPASMODIC COUGH (CHILDREN):

R/ Kunkumam-Kumkumapuvu
 $\frac{1}{2}$ to 1 gr. with breast milk 1 oz.

SORE-THROAT:

R/ Panavellam 1 oz.
Pepper 10 in number grind and make
loesenger of $\frac{1}{2}$ tola each by weight,
used for chewing.

THREATENED ABORTION:

R/ Tamarai (Padmam)
A paste of the root and stem ap-
plied over the abdomen.

TOOTHACHE:

R/ Camphor (Karpooram)
Camphor 3 gr. covered in thin cotton
and kept between the teeth.

R/ Camphor 3 grs.
Chukku 5grs. Grind with water
make into a ball and keep
at the painful gum.

SKIN DISEASES:

R/ Niradimuthu (Tuvarka)
A paste of the seed mixed with
cocoanut oil. For external ap-
plication.

R/ Pungam seeds (Karanjabeejam)
A paste of the root to be applied
over the affected area.

R/ Seemai Agathi (Dadrughna)
A paste of the leaves with a little
borax-applied over the part.

R/ Kovai (Bimba)
Juice of the fresh root $\frac{1}{2}$ to 1 oz.
applied externally.

SCORPION-BITE:

Sweet Potato (Velli Kilangu)
A paste of it warmed and applied
over the spot relieves pain.

SCABIES:

R/ Arasampattai (Pippalam)
Infusion 1 oz. to 2 ozs. To be
given internally and also used
for washing.

SCALDING OF URINE:

R/ Sombu (Madhrika)
Decoction of the fruit 1 oz to 2 ozs.
two times a day.

THIRST:

R/ Akarakaram (Akarakarabham)
A small piece of the root to be
chewed.

UNCONSCIOUSNESS:

R/ Kuppameni (Arittamanjari)
or Marjara Mohini.) The Juice of
fresh leaves used as nasyam 2 to
6 drops into the nose.

ULCERS:

R/ Karbogarisi-(Avalguja)
Powdered seeds 1 tola. Kachoram
powder 1 tola. Mix these in
water or oil and apply exter-
nally heals ulcers.

UTERINE COMPLAINTS:

R/ Asokapattain (Asoka)
Decoction 1 oz. to 2 ozs. three times.

VOMITTING:

R/ Sombu-(Madhrika)
Decoction of the fruit 1 oz. to 2 ozs.
three times a day.

VENEREAL ULCERS:

R/ Sirukadaladi (Apamargam)

A paste made of the leaves with
a little opium can be applied
externally.

WORMS (INTESTINAL):

R/ Pakku-(Poogam)

Poogam 10 grs. Powder and given
in butter milk: 4 ozs. one dose.

WHOOPIING COUGH:

R/ Nathutakarai-(Kasamardam)

Kasamardam seeds powder 5 to 15
grs. with honey Leaves powder
5 to 10 grs. with honey.

**General Instructions For Preparing The Preparations Concerned In This
Brochure.**

Index of Preparation : (Fresh Juice):

1. Swarsasm (Fresh Juice) : Fresh and
green specimens of the drugs are to be
gently macerated and crushed and the
juice is then squeezed through a fine
muslin. The juice thus obtained is
known as swarasam. Dose: $\frac{1}{2}$ to 1 Palam.
Adjuncts to the Swarasam: Honey, Sugar.

2. Kwadha or decoction : One ounce
of drug is taken, crushed well and added
to boiling water. The fluid is filtered
after 3 to 6 hours and Dose 2 ozs.

3. Phantam or Infusion : The drug
is crushed and added to boiling water.
The fluid is filtered after 3 to 6 hours
and even 12 hours in some cases and
taken for use. Dose 2 ozs.

4. Panakam.—Syrup : One ounce of
sugar is added to two ounces of water
or decoction and heated on fire till the

whole fluid reaches the consistancy of
honey (Viscous. Dose $\frac{1}{2}$ to 1 oz.

5. Lehyam or Confection: The syrup
thus prepared is further heated till it
becomes more thicker and then the pow-
ders of the prescribed drugs are added to
it. It is then well mixed with a spoon and
a little ghee is added. When it is cool,
the mass of the lehyam is taken, ground
with sufficient quantity of honey and
made into a soft mass and used.

2. Kwadha or Decoction : One ounce
of drug is taken, crushed well and added
to 16 ounces of water. It is boiled till
the quantity is reduced to 2 ozs. and
filtered through a fine cloth. Dose 1 oz.

6. Powders : are got by pounding
the prescribed drugs after drying them
and through a fine cloth 5 to 10 grains.

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VAIDYARATNA CAPTAIN G. SRINIVASA MURTI, B.A., B.L., M.B., & C.M.

(Continued from Vol. III No. 3)

to take particular forms. and it stands as evidence of the existence of life; all these are the actions of Vayu, when unexcited. When we are taken through this catalogue of functions for which Vayu, Kapha and Pitha are responsible, a critic will perhaps ask—and the question is perfectly legitimate—"What is the principle that underlies this classification into Vata, Pitha and Kapha? To be scientific, a classification must be orderly and not chaotic; I can see no intelligible principle or order, in this chaotic mixing up of Digestion, Intellection, Greedlessness, Respiration, Enthusiasm, and all the rest of it." Now, this as I said, is perfectly legitimate criticism. How is this answered in Ayurveda? A vital concept that has to be understood in furnishing an answer to this question is the theory of Thrigunas "difficult to grasp and still more difficult to explain"; but an attempt at exposition of the recondite concept has to be made because it is the correlation of Vata, Pitha and Kapha with the three gunas Rajas, Satwa and Tamas which, when properly understood, serves to bring order to apparent chaos of functions—some physical and some mental—for which Vata, Pitha and Kapha are held to be responsible.

The Gunas

According to all the schools of Hindu thought, all "matter"—from the subtlest to the grossest—is characterized by

the exhibition of the three 'Gunas' which are generally translated as 'qualities'—a rather unsatisfactory rendering; because the term 'qualities' suggests the idea of pure abstraction, not the reality or substance; that 'Guna' is in Hindu thought; the notion of 'quality' is applicable only from the standpoint of Purusha (or Spirit), because they are not Purusha's essence or substance (if we may use such a term with reference to Purusha) but merely accessories: from the standpoint of Prakriti or 'matter' they are its very substance, or rather the triune substance or three substances in one, into which primal matter differentiated itself when the universe first came into manifestation. In this sense they are 'Dravyas' or 'substances' and not attributes. As stated by Wilson in his commentaries on Samkhya Karika, "In speaking of qualities, however, the term 'Guna' is not to be regarded as an unsubstantial accidental attribute, but as a substance discernible by Soul through the medium of faculties." Though described as three 'Gunas', one Guna alone is never found isolated from the others—they are ever a mutually interdependent 'Unity-in-trinity'. Professor Seal speaks of them thus in his *Positive Sciences of the Hindus* (1915 Edition), pages 3 to 5—"These Gunas are conceived to be Reals, substantive entities—not, however, as self-subsistent or independent entities but as interdependent moments in every real or substantive existence. . .

The Gunas are always uniting again. Everything in the world results from their peculiar arrangement and combination. Varying quantities of Essence (Satwa), Energy (Rajas) and Mass (Tamas), in varied groupings, act on one another, and through their mutual interaction and interdependence evolve from the indefinite or qualitatively indeterminate to the definite or qualitatively determinate. But though co-operating to produce the world of effects, these diverse moments with diverse tendencies never coalesce. In the phenomenal product whatever Energy there is, is due to the Element of Rajas, and Rajas alone; all Matter, resistance, stability is due to Tamas, and all conscious manifestation to Sattva. The nature of the interaction is peculiar. In order that there may be evolution with transformation of Energy, there must be a disturbance of equilibrium, a preponderance of either Energy or Mass-resistance or Essence over the other moments. The particular Guna which happens to be predominant in any phenomenon becomes manifest in that phenomenon, and the others become latent, though their presence is inferred by their effect." That erudite oriental scholar, the late Sir John Woodroffe (formerly Judge of the Calcutta High Court), in referring to this subject of the interaction of Gunas in his "Tantra of the Great Liberation" (Introduction—pages 31-33) shows clearly how differences in Guna-collocations make for difference of 'temperament' in different persons—a subject of first-rate importance in Ayurveda:—"The term 'Guna,' he says, "is generally translated 'quality' a word which is only accepted for default of a better. For it must not be overlooked that the three Gunas (Sattva, Rajas and Tamas), which are of Prakriti, constitute her very substance. This being so, all Nature which issues from

her, the Mahakaranasvarupa, is called Tri-gunatmaka and is composed of the same Gunas in different states of relation to one another. The functions of Sattva, Rajas, and Tamas are to reveal, to make active, and to suppress respectively. Rajas is the dynamic, as Sattva and Tamas are static principles. That is to say, Sattva and Tamas can neither reveal nor suppress without being first rendered active by Rajas."

The question has been raised, and answered too, by Hindu thinkers as to why the Gunas of 'Matter' are three, and three only, neither more nor less; but, a consideration of this question takes us to speculations concerning the 'First' or 'Final Causes', which it is best to leave unattempted here. It is enough for us to note that this triplicity of Prakriti (or matter) corresponds to the triplicity of Purusha (or spirit) and that this triple nature alike of 'Matter' and 'Spirit', is a primal, fundamental and inescapable characteristic—the very essence so to speak—of every manifested existence; for, in this phenomenal universe, there is neither 'matter' (Prakriti) alone, nor 'spirit' (Purusha) alone, but it is ever Prakriti-Purusha (spirit-matter)—spirit ever limited by matter, and matter, ever ensouled by spirit. But, of course, 'spirit-matter' is of various grades—minerals, vegetables, animals, human beings, divine beings, and so on. From the subtlest and highest Deity of Ishvara to the lowest and grossest stone, all is "spirit-matter". What differentiates us distinctly as Human beings from the other kingdoms of Nature is not so much the fact that our physical bodies have a distinct anatomy of our own (even our corpses have that) but the fact that Jivas (or Egos or Consciousnesses) have reached, in their evolutionary ladder, to a particular rung (viz., the human rung), while the Jivas

(Egos or Consciousnesses) animating the animal and other kingdoms of Nature are still at its lower rungs—younger brothers of ours, standing at those levels, where we ourselves stood yesterday or the days before, counting by Nature's time. Looking at it in this way, there is nothing in this world which is not Jiva or a Consciousness or a living being; everything is living matter characterized by the three Gunas—Rajas, Satwa and Tamas; we have Rajasic, Satwic, or Tamasic animals, vegetables, foods, drinks, drugs, etc. just as we have Rajasic Satwic, or Tamasic human beings. It is all of One Life—all is 'spirit-matter' (*Purusha-Prakriti*). In the light of this teaching we can understand why the Ayurvedists hold that the Life of the human being, like Life in any other kingdom of Nature, must necessarily exhibit a primal and fundamental triplicity, viz., Rajas, Satwa and Tamas, a triplicity which in the living human being is shown in Life, Mind and Matter of Vata, Pitha and Kapha respectively. In the light of this teaching, we may be able to follow the statement already made that the Dhātu triad, Vata, Pitha and Kapha represent in the living individual these universal, inseparable *Thrigunas* (The Guna triad) *Rajas, Satwa and Tamas*, hypostatized, according to preponderance of one or other Guna into *Life, Mind and Matter* or the *Vitality principle, the Psychic principle and Physical matter principle in man*. Orthodox Western Physiology deals only with the last and not as yet with the Vitality or Psychic principles; from this standpoint, its language is of one dimension only while the language of Ayurveda is of three dimensions as it were. Hence, while we may attempt, as stated before, some sort of equating at the level of Physical Matter known to both Ayurveda and Western Physiology, there is

nothing as yet in the latter with which things at the levels of the vitality and psychic principles of Ayurveda could be equated. We frequently find that Vata is equated to Nervous system or Nerve-force, Pitha to Digestive and other enzymes and Hormones, Heat-regulating Mechanism and so on. At best, such equating may work at the Physical level in a number of cases; but it breaks down at other levels and in certain cases, even at the Physical level. For example, intellection is a function of Pitha representing preponderance of Satwa Guna. Intellection in Western Physiology would come under Nervous system (cerebro-spinal) which is equated with Vata. Here is a case where the equating of Vata and Pitha as given above is seen to be untenable. The untenability of such equating also arises from the fact that the principles of classification of the things equated are of two radically different orders. When Western Physiology speaks of the Nervous tissue, Muscular tissue, Epithelial tissue the principle of such classification is mainly anatomical based on the structure of the component parts. The principle of classification into Vata, Pitha and Kapha triads are mainly Biological based on functions correlated to the three gunas. The futility of attempts to find one to one equivalents between terms of these two classifications may be illustrated by an analogy with reference to an attempt at equating each territorial division of a city like Madras with a particular division of its communal or professional distribution. Each territorial division comprehends many communal elements—Hindus, Muslims, Parsees, Christians, Harijans etc., and there may be variations, in this respect, from division to division, one division containing all the communal elements of Madras while of others may

show varying numbers less than the total number of communities found in Madras. Similarly, each division may comprehend Teachers, Lawyers, Doctors, Artisans etc., representing the various professional classes residing in Madras; and there may be variations from division to division varying with the numbers and classes of the professional elements resident in each division. Under such circumstances, the question of equating the terms of different classifications in terms of one to one agreement would be a futile proposition. Not dissimilar is the attempt to equate the terms of the functional classifications of Vata, Pitha, and Kapha in terms of the structural classification like the nervous system, glandular system, skeletal system and the like. It would not be correct to equate the functions of Nervous system as a whole to Vata alone or to equate functions of the Vata to Nervous system alone though this is done by certain scholars engaged in comparative study. Vata, Pitha and Kapha are each responsible for certain functions of both the Psychic and nervous systems; it is not Vata alone that is responsible for functions of the nervous systems as a whole. So too, Vata, Pitha and Kapha are each responsible for certain functions of the digestive system; it is not Pitha alone that is responsible for functions of the digestive system as a whole. So long as the principles of classifications and even the very definition of a human being are so different as in the case of Ayurveda and Allopathy it is futile to seek equations of exact equivalence or one to one agreement. Further, the terminology of Vata, Pitha and Kapha is used in relation to the *living* human body only while, in speaking of the same body after death—after the human Jiva has withdrawn from it—it is said that the body has attained Panchatvam

(a synonym of death) to indicate that the terminology to be used thereafter is the general Panchabhutic one applicable to all physical matter generally and not the terminology of Vata, Pitha and Kapha applicable to the *living* human being. Orthodox Western Physiology deals with the human body as only a Material entity while to the Ayurvedist the living person is really a Jiva or Spiritual entity animating and functioning for a time through Material bodies or Koshas such as the Mental, Emotional and the Physical. Under the Ayurvedic View, Jiva functions in and through all Koshas; and Vata, Pitha and Kapha are responsible not only for certain physical functions but also for certain Mental and Emotional functions classifiable under the Heads of Rajas, Satwa and Tamas. It is in this classification that we should seek to find the answer to the query of the critic noted at the beginning of this topic which was to the following effect:—“In the list of functions of Vata, Pitha and Kapha, there is a chaotic mixing-up of physical and mental functions. What is the principle that brings order into this chaotic mix-up?” The answer is that the physical and mental functions of Vata come, quite logically and understandably, under “Rajas,” those of Pitha under “Satwa” and those of “Kapha” under “Tamas.” With this light, we may be able to see order where we saw chaos before and also to see order at all levels of our lives—physical, emotional and mental and not merely at the physical.

Nature of Thridhatu.

From this it will be seen that Vata, Pitha and Kapha correspond to the Panchabhutic analysis of the body is essentially a physical conception (just as the Physicist may say that matter is built up of solids, liquids, gases, etc.),

while the Thri-dhatu analysis is essentially a Biological or rather a Bio-physical one, corresponding to the primal and fundamental triplicity, viz., Rajas, Satwa and Tamas, exhibited by the human Jiva. As regards the correspondences between these two classifications (viz., the Physical and the Biological), Akash and Vayu are held to enter into the constitution of Vata (which is Rajasic) while to enter into the constitution of Pitha (which is Satwic and Prithvi and Ap, of Kapha (which is Tamasic). I must also mention here that, according to some authorities, the reason for not taking separate note in the dhatu category of Akash at one end of the scale of Panchamahabhutas and of Prithivi at the other, is this; Akash is unmodified and all pervading, while Prithivi is the last of the five Mahabhutic states of matter, and there is no further modification beyond it; from the standpoint of Dhatu interaction and equilibrium, the maintenance of which is the concern of Ayurveda, it is not necessary to take separate note of things which are not modified; hence it is that Akash is grouped with Vayu while Prithivi goes with Ap. Be this as it may, we may envisage the thridhatu—Vata, Pitha and Kapha—as the three Bio-physical elements, or corpuscles charged with human life, and corresponding respectively to Rajas, Satwa and Tamas. They stand, in the living body, for three groups of substances, the individuals of which, however much they may differ from one another, possess nevertheless certain characteristics common to every member of the group; thus, Vata corpuscles are all predominantly Rajasic, Pitha corpuscles, all predominantly Tamasic. We may therefore describe Vata, Pitha and Kapha thus:

Vata is that primal constituent of the living body whose structure is Akash-Vayu, and whose function is Rajasic, it

being concerned with the production of those physical and mental processes which are predominantly Rajasic (activating or dynamic) in nature: hence, as has been noted in the catalogue of functions of Thridhatu discussed already, the presence of Vata is to be inferred in such mental phenomena as exhibition of enthusiasm, concentration, etc., as also in such physical phenomena as respiration, circulation, voluntary action of every kind, excretion and so on. It will be seen that many of these physical phenomena are included among those which Western Physiologists would assign primarily to the activities of the nervous system (both cerebrospinal and Autonomic.)

Pitha is that primal constituent of the living body, whose structure is Thejas and whose function is Satwic, it being concerned with the production of those physical and mental processes which are predominantly Satwic (balancing or transformative) in nature; hence the presence of Pitha is to be inferred (vide, catalogue of functions of the Thri-dhatu given before) in such mental phenomena like intellection, and clear conception as also in such physical phenomena as Digestion, Assimilation, Heat-production and so on; it will be seen that many of these physical phenomena are among those which Western Physiologists would include under the activities of the Thermogenetic and nutritional systems (including Thermogenesis and the activities of glandular or secretory structures—especially of the Endocrines or Ductless glands, whose internal Secretions or Hormones are now known to be of such vital importance in Digestion, Assimilation, Tissue-building and Metabolism generally.

Kapha is that primal constituent of the living body, whose structure is Ap, Prithvi and whose function is Tamasic,

it being concerned with the production of those physical and mental processes which are predominantly Tamasic (conserving or stabilising) in nature; hence the presence of Kapha is to be inferred in such mental phenomena as exhibition courage, forbearance, etc., as also in such physical phenomena as the promotion of bodily strength and build, integration of the structural elements of the body into stable structures, the maintenance of smooth working of joints, and so on. It will be seen that many of these physical phenomena are among those which western physiologists would include under the activities of the skeletal and anabolic systems; but, it is difficult to interpret in terms of Western Physiology, that all-important function of Kapha, which is concerned in protecting the tissues from being consumed as it were, by a internal 'fires' of Pitha if they were not kept in check by the 'waters' of Kapha. It seems probable that the problem of explaining how the internal 'fires' in the living body were ever kept burning bright, though surrounded always by the 'waters' of the body, exercised the minds of the Hindu Scientists, just as, since the times of Lavoiser, the minds of Western Scientists are being exercised over the analogous problem of explaining how at the comparatively low temperature of about 37°C. physiologic aloxidations are being continually carried on in the living body, at a comparatively rapid rate; while, outside the living body, the same materials are consumed or oxidised with extreme slowness.

There are many things now happening in the world of Modern Science and Modern Medicine which may make us, unless we are careful, to jump to hasty conclusions on the basis of a few striking resemblances; but, such temptations must be resisted while the critical study and investigation of recorded facts and

observations must go on with all possible diligence. In illustration of what I mean to convey, I may consider here a pointer in relation to the very topic of the Thridhatu theory that I have discussed above; in the light of what is referred to in the latest books on Modern Physiology as "The Humoral transmission of Nerve impulse".

Sarangadhara, a renowned Ayurvedic authority with a flair for expressing Scientific facts through impressive poetic imagery speaks of Pitha and Kapha humors as Pangu (Lame individuals) dependent for their movement from place to place on the lead given by Vata dhatu and journeying to whatever place Vata leads them. This is, of course in perfect consonance with the ancient teaching that Rajas, is responsible everywhere for movement of every kind and that as Vata is the Dhatu in the living human being which is preponderatingly Rajasic in nature, it is the Vata humour that brings about the movement of every kind and degree including the transmission and circulation of bodily humours, body fluids and bodily elements of every kind.

Professors of Modern Physiology have now begun to speak of "Humoral" transmission of nerve impulses without the least suggestion of the term "Humoral" being unacceptable to them as when the Ancient Thridhatu theory was spoken of as the exploded or discarded "humoral" theory. On the contrary, they say that the evidence is now very complete that nerves do not act on the tissues directly but through the Agency of Chemical or "humoral substances" like Acetyl-choline, Adrenaline and the like. Acetyl-choline is released at the nerve-endings of ordinary Somatic nerves. It is also liberated in the region of Motor nerve-endings or plates; and it now seems likely that many of the

phenomena noted in relation to muscles are applicable as due to release and accumulation of Acetyl-choline at nerve endings. Some sympathetic nerves have also been shown to show a chemical or humoral substance, sympathin, which has an action almost identical with that of Adrenaline and the opposite action of Acetyl-choline. Humoral transmission may also occur within the nervous system itself; for if fluid is passed through the superior cervical ganglion and the sympathetic stimulated, Acetyl-choline is released into the perfusion fluid. Every organ of the body over which we have no voluntary control appears to be supplied with two sets of fibres—from the sympathetic and the parasympathetic—which have opposite functions. The sympathetic or Accelerator group is termed *Katabolic* (according to Gaskell's nomenclature) as they are concerned with general increase of work and utilisation of energy in the various parts of the body while the Para-sympathetic group is termed *Anabolic* as it is more intimately concerned with the processes which take place during bodily rest. Here then we have the idea of two systems—the sympathetic and para-sympathetic—with opposite functions, one being *Katabolic* and the other *Anabolic*. In either case, the resulting action is due to release of certain humoral substances of two groups with opposite properties namely the adrenaline group released by stimulation of the sympathetic or *Katabolic* nerves and the Acetyl-choline group released by the Par-sympathetic *Anabolic* nerves.

From this, it is tempting to jump to the hasty conclusion that the two classes of humoral substances of Allopathy with opposite properties are equitable to the two humours of Ayurveda with opposite properties viz., Pitha (the *Katabolic* or breaking down humour)

and Kapha (the *Anabolic* or building-up humour) which are both Pangu or lame humours in the language of Sarangadhara their transmissions and releases at any point or points being dependent on the humoral transmission of the stimulated nerve-impulse equitable with Vata activity. Thus, we may be tempted to conclude, is the ancient Ayurvedic teaching justified by the latest findings of modern Allopathy; but, this temptation must be resisted; for, the comparisons and resemblances are far too superficial and the recorded observations and experiments confined so far too limited a field to justify any such general conclusions being drawn.

Prakriti (Temperament).

Persons are broadly marked off from one another into three classes or groups, viz., Vata, Pittha, Shleshma, according as the type of their inherited Thridhatu-constitution shows respectively a predominance of Vata, Pitha or Shieshma; those Dhatus which are not predominant may be either co-operant or latent, so that we have a number of sub-groups, each with its own type of inherited Thri-dhatu balance; then again, depending upon quantitative variations, we have many ways in which Thri-dhatu equilibrium is possible; it is due to such differences in the constitution of the inherited dhatu balance that every person somehow differs from every other person, although all are classifiable under one or other of the three primal and fundamental groups spoken of above, viz., persons of Vata, Pittha and Kapha prakritis, or 'temperaments' as the English rendering has it. In Ayurveda, it is of vital importance to know the Prakriti or 'Temperament' of every person, because all his life-activities, both in health and disease, have to be judged and adjusted with

reference to his own type of inherited dhatu-constitution; and we cannot intelligently adjust his Nurture (including his nutrition and environment) unless we know his Nature or Prakriti. For the proper diagnosis of a person's Prakriti, a careful examination (both physical and mental) is necessary; the characteristic features of each group are set down at length in works on Ayurveda; but for our present purpose, it is not necessary to go into those details; it is enough to know that it is a cardinal principle of Ayurveda that all human beings are broadly classifiable under the three primal groups of Vatalas, Pitthalas and Shleshmalas, according as the constitution of their inherited dhatu-tariads show a predominance of Vata, Pitta or Kapha substance. That leaders of Medical thought in the West have now begun to think along similar lines may be gathered from the following extract from the writings of a distinguished British Physician, Dr. Leonard Williams, which reads strikingly 'Ayurvedic' even to the very notion of a person's inherited features and constitutional peculiarities being dependent on the peculiar mode of mixing or combining of his inherited 'humours' or 'essences' as he calls them:—"while the time is not yet ripe for dogmatic statement, there is a large mass of evidence which goes to show that the ductless glands, the endocrines, with their essences, their hormones as they are called, constitute the main-spring of this surprising mechanism. Nor does the importance of the endocrines stop here, for according to the exact proportion in which their essences are admixed in your blood, you are tall or short, dark or fair, phlegmatic or choleric, saint or sinner, sexual, homosexual or sexless, male or female." (British Journal of Psychology, Medical Section, Volume II, page 262.) Then again, we have Prof. Goddard stating

thus in his "Psychology of the Normal and the Sub-Normal" (page 228):—"Cannon's and Crile's discoveries and other work with the ductless glands made it entirely possible that, while we may not be dealing with blood, yellow bile, and whatever fluids the ancients thought of under the name of black bile, and phlegm, we may nevertheless be dealing with such fluids as are secreted by adrenal glands, thyroid glands the thymus and the other glands of internal secretion. It would seem quite probable then that we are to think of different individuals as having inherited different constitutions in these particulars." So too we may cite evidence in support of the 'humoral' theory from the large mass of facts that have now gathered round the subject of the transfusion treatment of haemorrhage, shock etc., and the classification of persons according to their types of blood-grouping, depending on their possession of certain humoral substances or factors (including the recently discovered Rh. factor) all stated to be inherited according to the Laws of Genetics.

Metabolism and the Seven Dhatus.

Metabolic changes, life activities in general, are brought about, maintained and regulated by Vata, Pitta and Kapha; we may consider first the processes by which the food ingested is transformed into various tissue-elements or 'Dhatus' as they are called. It has to be noticed here that as stated before, Ayurvedists use the same name, viz., Dhatu, (literally 'support') to designate both the primary Dhatus Vata, Pitta and Kapha, as also the secondary ones, viz., Rasa, Rakta, and other elementary tissues, which we are going to consider now.

(To be Continued)

Raja Serfoji, the protector of Art and Culture.

Dr. S. VENKATARAJAN, L. I. M.

PANDIT FOR RESEARCH, MEDICAL SECTION, SARASWATHI MAHAL, TANJORE.

PEOPLE lived in peace and prosperity for about 320 years (1535-1855) under the Naik and Maharattah kings of Tanjore who were also patrons of learning and arts. Unfortunately, most of our Sanskrit and other classical literatures in the north suffered destruction by series of Mahamudan invasions and also for want of State patronage. But in the South, Vizianagar Empire and its dependencies could store much treasures in those literatures. Vidyanaya alias Sayana was mainly responsible for the revival of Hindu culture in those days. From his time onwards, there were nearly 125 authors who contributed much to Sanskrit literature and also developed fine arts like Music, Jyothisha, Medicine, Vedantha.

Koji, son of Sambaji (1676-1683) was the founder of Maharattah Dynasty at Tanjore. Nine kings succeeded him. Some of them were very learned and encouraged art and literature. They were Shahaji, Thuljaji, Prathapasimharaja and Serfoji. II. Being authors themselves they deserve to be specially mentioned for their literary attainments and for their contributions towards Saraswathi Mahal (Temple of learning).

SHAHAJI (1684-1710) It seems that his ancestors had no issue for a long time and a child was born through the grace of a Mahamudan Fakir by name Sha Shereif. Hence the child was given the name of Shahaji. This king was highly learned and encouraged learned men. There are records to show

that nearly 46 learned pandits in recognition of their merits received free assignment of a village called Shahajirajapuram named after him. It is now called Thiruvisanallur.

THULJAJI (1719-1735) He was a great scholar and author of many works which are still preserved in Saraswathi Mahal. They were Natyagama, Sangeetha saramrutha, Danwanthari Vilasam & Danwanthari Saranidhi.

PRATHAPSIMHARAJA (1741-1764) He was a scholar in Marathi and is the author of Madanasanjevanam, Sithakalyananatakam, Parijatha pushpaharanam, Ushakalyanam, and Krishnajanatanatakam.

SERFOJI. II. (1802-1852) Himself a scholar he patronised many pandits. He had collected a large number of manuscripts and especially during his pilgrimage to Benaras. He was the master of seven European languages such as English, Greek, French, German, Latin. He was the founder of 3 Colleges by name Naveenavidyakalasala (College of Modern Knowledge), Angrazi Kalasala (College of English) and Samskrithakalasala (College of Sanskrit) These Colleges were the training ground for many students. In the palace buildings, different sections were set apart for different purposes (e. g.) Saraswathi Mahal for library, Sangeetha Mahal for Music, Jyothisha Mahal for the research in Astrology and Danwanthari Mahal for Medicine. Many exponents from East

and West assembled together in these buildings, poured their knowledge and recorded them. Raja Serfoji was so much devoted to learning and literary pursuits that he handed over the administration of the district to the British and kept contented to receive 1/5 of the general revenue from them. Visitors from various places even now admire the beautiful construction of Sangeetha Mahal which can accommodate an audience of more than 1000 at a time and is so constructed that one can hear the music performance clearly and audibly even from the remotest corner of the building, without the present day loud speaker equipments. This testifies to the high proficiency then attained in the science of acoustics.

Serfoji's interest to improve every branch of Medical Science was unique and he tried to give relief to the suffering humanity by various means. A herbarium was maintained in front of Danwanthari Mahal to grow rare medical herbs. Experienced native physicians of approved merit were assembled in the Danwanthari Mahal and over 200 receipts were collected from them for various diseases. These receipts were then divided into 18 Parts classified according to the diseases and got composed in the form of verses in simple Tamil by the palace Tamil Pandits a few of them being Velayuda Upadyayar, Thiruvengadathan pillai and Sivakozhunthu Pandaram. This compendium of treatment is called 'Sarabendrar Vaidya Muraigal' or 'Serfoji's treatment of Diseases'. Medicines prepared in Danwanthari Mahal in the form of 'Kattu' (丸) in Tamil which maintain their potencies for centuries are still available. One can see the name seal of the medicines on one side and the year of its manufacture on the other side in each tablet

medicines. Some of them are Swar-anboopathy, Rasaboopathy, Malini-vasanthan, Vasanthkusumaakaram. Original manuscript copies in Modi script (A script used by Maharattas) giving indications for the use of these medicines with the method of its administrations are still available.

Further we have got records to show that an Ophthalmic Research Institute was also maintained by Serfoji where Eastern and Western methods of Treatment were compared and treatment was undertaken. On the admission of the patient the picture of the diseased eye was drawn in natural colours by the Royal Painter and then the case sheets were carefully written. All eye operations were conducted in the presence of His Highness Raja Serfoji. There is a case on record to show that in a case of Cataract operation, the needle got broken when it was introduced into the capsule and the attending doctor took it away carefully by forceps. The reliability of the treatment is to be appreciated. All the patients were fed in the Hospital and at the time of their discharge they were given an inam (Free gift) of Rs. 2 from the palace funds. (the present value is Rs. 20/-) Some of the chief physicians of Danwanthari Mahal were Iyyakannu Pillai, Linga Vaidyar, and Iyyavu Iyer.

There are also records to show that Raja Serfoji equipped the Danwanthari Mahal with large sized Anatomical charts which are not available in print now-a-days. There are also manuscripts in Modi giving out equivalent terms for anatomical names in Marathi. Raja Serfoji solved the problem 150 years ago by his attempt to give vernacular names to all Scientific and technical names.

The medical manuscripts as has ahead been stated, are classified under 18 heads which are detailed as below.

1. Treatment of Gastric Complaints.
2. Diseases of Pregnant woman, and Children.
3. Diseases of the eyes.
4. Ear, Nose, Throat.
5. Lung and Respiratory organs.
6. Diabetes and Diseases due to faulty metabolism.
7. Rheumatism and Paralysis.
8. Venereal Diseases.
9. Fevers.
10. Anaemia.
11. Piles.
12. Leprosy.
13. Skin Diseases as itches, boils etc.
14. Delirium.
15. Treatment of Poisons.
16. Wounds, Injuries and Cancers.
17. Purgatives and treatment of Diarrhoea.
18. Diseases resulting from Fevers.

Under the auspices of Madras Govt. we have so far published the first two books viz. Sarabendrar Gulma Chikitsai and Garbini bala Roga Chikitsai. Books of Eye Diseases, Ear, Nose, and Throat, Diabetes, and Lungs and Respiratory Organs, are in the press. In the course of about 4 years, it is hoped to publish all the other works in so many printed volumes and presented to the public. In this connection it may be said that Serfoji's receipts are so simple and at the same time very effective. Now a days Cancer is said to be an incurable disease: but Serfoji's receipt for External Cancer is very simple. An application of Paste consisting of rat's excreta and cow's urine is used for softening the Cancer and Chitra moolam with sugar is applied for the cure. Now, it is learnt that experiments are being carried out on the West with the extract of Rats for the cure of Cancer.

The following receipts were personally tried by me and found effective. For Dysmenorrhoea, take one piece of Garlic, pepper 10 in number, and tender leaf of Morinda Citrifolia (楮實子) grind

these with water to the size of an areca nut. Internal administration of this medicine soon after bath on the third day of menses will give immediate relief.

"The impressions of Bishop Heber, an European who paid a visit to the Maharaja on 26th March 1826 and the remarks made by him on that occasion are quoted as under:

"The Bishop paid a private visit to the Raja Serfoji who received us in his library, a noble room with 3 rows of pillars and handsomely furnished in the English style. On one side there are portraits of the Maharattah dynasty from Shahaji to Shivaji.

Ten book cases containing a fair collection of French, English German, Greek and Latin books and 2 others of Sanskrit and Maharattah manuscripts. In the adjoining room there is an air pump, an electrifying machine, an ivory skeleton, astronomical instruments, and several other cases of books, many of which are on the subjects of MEDICINE WHICH WAS FOR SOME YEARS HIS FAVOURITE STUDY. He showed us his valuable collections of coins, paintings of flowers and natural History, with each of which he seemed to have considerable acquaintance, particularly with the medicinal virtues of the plants in his HORTUS SICCUS. When we took our leave, his minister showed us a noble statue of the Raja by Flaxmen which stands in the great hall which was used by ancient Hindu Court before the conquest by the Marattas. The pedestal is a remarkably large and fine slab of black granite 18' by 16½'. His stables contain several fine English horses."

The Theory of Tridosha or Tridhatu

By

AYURVEDACHARYA A. RAMAN

As the foundation of Ayurveda rests on this theory, I would endeavour, first of all, to explain the terms Vayu, Pitta and Kapha, as understood by Ayurvedic writers of old and then to explain the theory.

The meaning of Tridosha or Tridhatu : Gananath Sen, M.A., L.M.S., Saraswathi, the late Mahamahopadhyaya, Kaviraj, writes in his works as follows :

The Ayurvedist believes that all physiological functions are controlled by three principles which are, strictly speaking, called Dhatus when they are normal, and Doshas when they are abnormal, the last expression being often used in a general sense.

Vayu or life-force from Va (वाग तिगन्ध नयोः) (to move) The first of these, Vayu is the motive or dynamic principle, which causes the various visible and invisible motions in the body. It is born with the first cell which when impregnated begins to divide into many cells and becomes gradually organized through the differentiation of the cells into different structures. It creates blood-vessels, lymphatics and nerves and pervades the complex organism. This inherent cell-force manifests itself later on the higher evolution, known as nerve force. But this nerve-force is not the whole connotation of Vayu as some people understand. It is the differentiated or more crystalized form, as it were, of Vayu and is manifest only in higher forms of life. But the cell-energy persists in every cell. A man, for instance, grows a tumor,

It becomes gradually organized; blood vessels and nerves and lymphatics grow into it. Gradually if it comes in contact with hard substances, a horny growth takes place on it. Who guides all these growth? It is this life force or cell-force called Vayu. This explanation is not my own invention. Vayu, according to Charaka Samhita is the force that moves and holds all the functions of the body in equilibrium, that manifests itself in different nerve-centers that "carry sensation and motion, that control the digestion, the circulation and the glandular and excretory activities. It causes the differentiation of parts in fetal development. Its action manifests itself also in the processes of intellection and feeling."

उत्साहोच्छ्वासनिश्वास चेष्टाधातुगतीरसमाः

समो मोक्षो गतिमतां वायोः कर्मविकारजम्

(चरक-सू 18)

Thus it has been rightly said that "Vayu guides all functions pertaining to Pitta and Kapha, which are 'lame' without its lead".

वायुस्तन्मयन्तः प्रणोपानसमानगानागानरमा प्रवर्तकश्चेष्टानामुच्चावचानां नियन्ता प्रमेता न मत्सः सर्वेन्द्रियाणामुद्योजकः सर्वेन्द्रियार्थानामधि बोधासर्वशरीर धातुव्यूहकरः सन्धानकरः शरीरस्य प्रवर्तको वाचः प्रकृतिः स्पर्शसन्धेः श्रोत्रस्पर्श नयोर्मूलं हर्षोत्साहुषोर्गमिः समीरणो भेदोप संशोषणः स्नेहावर्द्धिमच्चानां स्थूळानां ज्योतसां भेदाकर्ता गर्भाकृतीनां आयुषोनुवृत्तिप्रत्यय भूतो भवत्यकुपितः

पित्तं पंगुः कफः पंगु पंगवो मलधातवः वायुनायव- नीयन्ते तत्तत्तन्मयमेववत् (वाङ्मयसंहिता)

Such a conception of Vayu is not incompatible with the teachings of modern physiology. पित्त-तप-सन्तापे

Pitta—the consuming or metabolic principle. Pitta is the second principle. It is the principle which manifests itself in different forms in different chemical activities, mainly alimentary digestion and general metabolism. Through certain chemical changes in the ingested food and in the tissues, it helps the absorption and metabolism of the nourishment that is available to the body. As a result of this, it keeps up the equilibrium of heat in the body. It is therefore sometimes called "Agni" (अग्नि) or fire.

अग्निरे वशरीरे पित्तान्तगतः कुपिताकुपितः शुभाशु- भानिकरोति तद्यथापक्तिमपक्तिं दर्शनमदर्शनम माता- मातृत्व मूत्रमग्नः प्रकृतिविकृतिवर्णौ शौर्यं भयं क्रोधं हर्षं मोहं प्रसादमित्येवमादीनि चापराणि द्वन्द्व्यादीनि (चरक सूत्र)

जाठरो भगवानग्निशरीरोक्षस्य पाचकः सौक्ष्म्याद्वासा- नाददानो विवेक्तुं नैव शक्यते. (सुश्रुत सूत्र)

It occurs in a subtle imperceptible form; and in a crude form. The subtle form manifests itself in the various crude forms, e. g. secretions like gastric juice, bile, pancreatic juice, etc. and helps the digestion in and absorption from the alimentary tract. This is called "Kaya-agni" or "Jathargani" (कायाग्नि) "The Alimentary Fire". There is another form of digestion the metabolism in the tissues which is carried on by the subtle form known as the Dhatwagni (धातवाग्नि) or "the tissue fire" 'सप्तभिर्देहधातारो धातवो द्विविधे पुनः। यथास्वप्नप्रतिभिः पाकं यान्ति किट्प्रसादवत्

(चरक-चि.) On the mental side, another form of the subtle substance (साधकपित्त) is said to circulate in the blood (as internal secretion?) and to influence the memory and mental contentment. Further, material for certain sensations is also cooked by Pitta. They say that at the end of the Retina a chemical process takes place by which the image is imprinted for the time being on the sensitive surface. In western physiology, it is the photochemical substance which is probably identical with that the Ayurvedists call 'Alochaka Pitta. (आलोचकपित्त) The colouring matter of the blood is also said to arise from the action of another form of Pitta known as "Ranjaka Pitta रञ्जकपित्त (Haemoglobinogen) that is said to exist in the spleen and liver. In one word therefore you can take pitta as the one great principle which guides all chemical activities that are needed to sustain life.

Kapha—the cooling or preservative principle.—I will next take up Kapha or Sleshma, the cooling or preservative principle. It is said that just as there is the consuming principle which keeps up the fire burning, there is another principle which keeps up a certain amount of coolness and preserves the tissues from burning away. This cooling principle keeps the body cool giving normal secretions which are preservative in their nature. For instance, it always induces the secretion of a cooling or mucous substance in the mouth and nostrils, in the respiratory passages, in the eyes, in the stomach, in the joints. When ever there is friction, wherever there is chance of drying up, whenever there is heat production, there comes in this principle manifesting itself in the secretion of preservative fluids.

सन्निधौ भोजने हनरोपणपूरणवृद्धतर्पणबलस्यै यकृन्
श्लेष्मा पञ्चधा प्रविभक्त उदककर्मणाऽनुग्रहं करोति—

(सुश्रुत सूत्र)

सोम एव शरीरे श्लेष्मान्तर्गतः कुपिताकुपितः शुभाशुभा
निकरोति; तद्यथा दाढ्यं शौथिस्यमुपचयं कार्यमुत्साह-
माहस्यं वृषतां क्लीबतां ज्ञानमज्ञानं बुद्धिमोहमेव मादीनि
चापराणि द्वन्द्वादीनि. (चरक-सू.)

As there are several forms of crude Pitta like gastric juice, bile and pancreatic juice, so also this principle is principally manifested in several tangible forms like epithelial and endothelial secretion, e. g. synovial mucus, normal lymph, etc. Those crude forms of Kapha known as "Rasaka", "Tarpaka", "Sleshaka" etc., are identical with mucus, synovia normal lymph, etc. On the mental side too a subtle form of Kapha is said to circulate in the blood and produce a damping and cooling effect on the mind giving patience and power of inhibition so as to check the restlessness of Raja—the mental principle that urges the action and agility. Disturbance of the Tridhatu or Tridosha. Let us now consider some symptoms caused by the disturbances of Tridosha equilibrium. When one of these principles, for instance Pitta is accentuated (पित्तवृद्धि) the subject feels heat all over his body; he feels burning sensation in the eyes and in the hands and feet; he desires cold baths and cold drinks; his digestion is upset—by over-secretion of acid in the stomach a larger amount of bile is also secreted from the liver and the stools are deep yellow. In the whole system, there is evidence of increased combustion creating great hunger and thirst. On the other hand in failure of Pitta (पित्त) the patient's body temperature remains subnormal:

the gastric juice and bile and other digestive juices are secreted poorly; there is total anorexia. The indigestion is of a different type—that of deficiency. The food is passed undigested and the patient soon becomes anaemic partly through non-assimilation of food and partly through failure of "Ranjaka Pitta the original colouring principle of blood.

Take another instance—if a man's kapha principle is accentuated (कफवृद्धि) He is said to have caught a cold. His nasal mucous membrane secretes more than is necessary to keep it moist. The mouth becomes full of Saliva. The stomach does not function properly and becomes full of mucus. The joints become some what rigid and painful with increased synovia. The patient feels great lethargy and lassitude. On the other hand, if this principle is on the wane (कफक्षय) the skin becomes rough and dry, there is increased heat and thirst with sleeplessness. The joints become dry and stiff through failure of synovial and the various mucous membranes becomes parched.

If one is suffering from derangement of Vayu, there is either general nervous debility or high nervous tension. In the first case he finds himself weak and debilitated in all functions. He finds the secretory and excretory activities required for digestion and normal absorption below par. He finds his bodily and mental activity subnormal. Such a case is often called neurasthenia or nervous debility—the Ayurvedists call it Vayu-kshya (वायुक्षय) or the waning of Vayu. Take the other case, say one of Hysteria. A girl gets violent contraction of the muscles of her hands and feet. She gets cramps and fits. Her vision and hearing may be more acute

than normal. These are manifestations of Vayu-vridhi (वायुवृद्धि) (the hyper functioning of Vayu).

The Ayurvedic physician instead of treating this or that symptom in such cases treats the deranged principle or principles. He wants to bring about the normal state of the Doshic principles in the body according to the therapeutic methods depending on the theory of Tridosha. The subject is such that much longer discourse will be needed to deal with all the symptoms of Kshaya (waning) and Vridhi (waxing) of the three principles in different phases and with the pathological laws which are based on the working of these principle. But I hope it will be clear from what little I have said above that this theory of Vayu and Pitta and Kapha is not merely speculative but is highly practical from the view-point of the Ayurvedist, to whom, it is the key note of all physiological functions. When one thoroughly grasps this theory, many intricacies of the symptoms of diseases will not only become intelligible to him but will also be amenable to his methods of treatment. This is every day experience.

THE THEORY OF TRIDOSHA ENUNCIATED.

The theory may be summarised thus viewed at in three aspects:

A. The Physiological aspect.

1. There are three principles (called Dhatus or Doshas known as Vayu, Pitta and Kapha) which guide all physiological functions.

नित्याः प्राणवृत्तादिदेवातपित्तकफास्तयः विकृताः प्रकृति
स्थावातात् शुभुरसेवपिदतः सर्वेष्वङ्गुलुवातपित्तश्लेष्म-

णपुरवमन्यापक्षेन्द्रियबलवर्गसुखोपपन्नमायुषामहतोपपाद-
यन्ति-(चरक-सू.)

2. The maintenance of their equipoise or equilibrium means health.

विकारो धातुवैषम्यं प्रकृतिरुच्यते. (चरक-सू.)

य एव देहस्य समाविवृद्धौ त एव दोषा विषमावधाय
(अष्टाङ्गहृदयम्)

3. The disturbance of their equipoise or equilibrium leads to disease through perversion of physiological functions except in the case of 'Agantu' diseases (i. e. those caused by trauma, poisoning etc.), where the disturbance comes later.

सर्व एव विकारानि जानान्यत्र वातपित्तकफेभ्यो
निवर्तन्ते (सुश्रुत-सू.)

स्वधातुवैषम्यनिमित्तजाये विकारसंघा बहुवदशरीरे
नतेवृत्त्युत्पत्तिकानिलेभ्य आगन्तवस्त्वेव ततोविशिष्टाः
(चरक सूत्र.)

आगन्तुर्हि व्यथापूर्वमुत्पन्नो जघन्यं वातपित्तश्लेष्मणां
वैषम्यमापाद्यति. निजे तु वातपित्तश्लेष्माणः पूर्वं वैष-
म्यमापद्यन्ते जघन्यं व्यथामभिनिर्वर्तयन्ति (चरक.)

The Pathological Aspect.

1. The etiological factors described hereafter disturb the equipoise of the Doshas or principles according to definite laws and the abnormality manifests itself either in the waning (क्षय) or the waxing (वृद्धि) of the principle (or principles) deranged according to the nature of these factors.

दोषा एव हि सर्वेषां रोगाणामेककारणं-(अष्टाङ्ग-सूत्र)

यथाबलं यथास्वंच दोषवृद्धावितन्वितरूपाणि जहति
क्षीणाः समाः एवं कर्म कुर्वते. क्षयं स्थानं वृद्धिं च विज्ञेया
विविधा गतिः । (अष्टाङ्गहृदयम्)

2. The abnormal conditions of each of the three principles give rise to definite symptoms in special areas or on the general conditions which show clearly which principle is deranged and how.

वातक्षये मन्दचेष्टतावाक्तामःप्रहृषोमूढसंरोताचः पित्तक्षयेमन्दोष्माग्निता निष्प्रभत्वं च । श्लेष्मक्षये रुक्षताऽन्तर्दाह आमाशयेतराशयानां शून्यता सन्निवृत्तिर्यस्य वृष्णादौर्बल्यं प्रजागरणं च । (सुश्रुत-सू.)

वात दृढोत्प्लवकारूपं काण्ठ्यं कार्यं गालसुरणमुष्णकामिता निद्रानाशोऽप्यवलवत्वं गदवर्चस्त्वं च श्लेष्मदृढौ शोक्ल्यं शैत्यं शैत्यं गौरवमवसादस्तन्द्रानिद्रा सन्निविश्लेष्मश्च ।

When the abnormal condition persists, definite changes occur in the particular tissues (दृष्ट्य) concerned as the result of the affected areas causing pathological changes (दृष्ट्यविकृति). In them, the condition has been divided into six stages: (1) (सञ्चय) or the stage of gathering strength; (2) (प्रकोप) or the explosive stage; (3) (प्रसर) or the stage of extension; (4) or the affection of particular areas; (5) (व्यक्ति) or morbid tissue-changes in such areas and (6) (मेघ) or the climax stage when the disease is well established and calls for urgent measures, e.g., surgical interference, etc. The symptoms of all these conditions will be found elaborately described in Sushruta, Sutra, Chapter 21. In the case of trauma and other extraneous causes the pathological condition comes first and the derangement of the Doshas follow leading to further similar changes.

(C) The Therapeutic aspect.

1. All substances—food, drugs, exercise etc., have certain properties (गुण)

which act on the three principles in definite ways. In the case of food and drugs, the effect varies according to taste. (रस) the chemical changes undergone in the alimentary tract (विपाक) immediate constitutional effect (वीर्य) e.g. active principle structure, Mala Dosha, sthanum and other organ and mental structure feeling of internal heat and specific action (प्रभाव) on the constitution generally and on diseased conditions.

2. The ultimate goal of treatment is restoration of the equipoise or equilibrium of the three principles (दोष) and of the tissues (दृष्ट्य) by the employment of food drugs, exercise, enemata, etc., as are known to act (a) either against the deranged principles (हेतुविपरीत चिकित्सा) or (b) against the diseased condition particularly by specific actions (सद्व्याविपरीतचिकित्सा) or (c) against both हेतुव्याधि विपरीतचिकित्सा. The remedial agents employed are some times similar in nature to the deranged principle or to disease-symptoms or to both (e.g. hot application or inflammation, purgatives in dysentery.) This is called विपरीतायकारी.

3. The preservation of health (Preventive Medicine) mainly depends upon the maintenance of this equipoise by suitable food, air, exercise and the other measures recommended for health (स्वस्थवृत्त) as daily and seasonal routine (दिनचर्या-ऋतुचर्या) Brabmacharya ब्रह्मचर्या) or sexual continence; etc. These measures include the occasional use of particular kinds of food and modes of living and remedial agents to counteract the normal variations of the Doshas according to daily and seasonal distur-

bances (e.g. the use of laxatives in Autumn when Pitta is deranged).

The Tridoshak and the sympathetic Endocrinology—

A comparison, at this stage, between the ancient theory of Tridosha and the modern theory of Sympathetic Endocrinology may be attempted to some purpose, as the analogy between the two theories is striking from many points of view:

In both the theories there is a blending of the physical with the metaphysical the physiological with the psychological aspects, the only difference being this that the Ayurvedists are clear and elaborate on this point, whereas the Endocrinologists have only begun to get a glimpse of it. This would be clear from the following extracts from the writings of two famous Endocrinologists:—

"To unravel the intricate and esoteric mysteries of the glands of internal secretions, which deal with the secrets of life itself, there is danger of drifting into the metaphysical" — Leonard Williams.

"When we come to the consideration of the glands of the internal secretion, we are on different grounds altogether, almost on holy grounds for here we are dealing with the inner secrets of life itself."—T. Bradley Scott.

We also find in the modern theory of Sympathetic Endocrinology a blending of "Philosophy, Science, and Religion" similar to Ayurveda, and Captain Murti has rightly observed that some of the master minds of modern Western medicine are turning their attention to the reasons which appear so Ayurvedic".

Again, Frindenburg (Barker's Endocrinology Metabolism), another Endocrinologist, states that "there is an Endocrine factor not only in health and ill-health, in diet and drug, but in heat and cold, rest and exercise, sleep and waking, sun and shade, in fact all nature's telluric influences act on and by the complicated systems of glands of internal secretion. How else can we attempt to explain the systematic effects of such influences as wind, weather, altitude, climate, seasonal incidence, geographical distribution of diseases, etc."

One might feel that the above is a quotation from some elementary Ayurvedic text when we find that the diet, the hours of the day and the night, the seasons of the year, 'rest and exercise', 'sleep and waking', 'sun and shade', and even the various states of mind like that of jealousy, fear, joy, anger, etc. have been discovered to influence the three doshas and classified according to their relations to them. The Western science has only lately begun to take into consideration the influence caused by the various states of mind on the general health.

Dr. Ashutosh Roy, whose erudite article on this subject tempted me to include Endocrinology in this treatise, states:—

"Another point of analogy between the two theories is that both consider health and ill-health from the point of view of the "soil" giving the "seed" a secondary importance Hindu physicians describe the action of drugs from the sympathetic Endocrine point of view, so forcibly brought forward by Sajous, the pioneer American Endocrinologist, when he says that "Pharmacology-Endocrinology" will reveal the

importance of drugs as weapons against disease. Hindu physicians classify disease from the view-point of the 'soil' which is the same as sympathetic Endocrinology.

Finally the fact that Hindu physicians have associated their Tridosha theory with telluric influence and personal factors of the individual are additional proofs of the closest analogy The Pitta and Kapha are the keys to unlock the mysteries of opposing yet complementary glands of internal secretion.

'If therefore, the Tridosha theory' of Ayurveda bears an analogy to 'certain definite things in Western physiology', what harm there is to state it clearly. How can such interpretations be considered as 'fanciful'. The 'desperate attempts' of some Pro-Ayurvedists to show that "the teachings of Ayurveda square with the teachings of Western medicine". This analogy is unmistakably evident by comparative study.

'On the other hand when one finds such close analogy between the oldest theory of ancient medicine and the latest theory of the modern medicine, one has every legitimate reason to be proud of the fact that the modern Western medicine with the boast of scientific basis is slowly but surely drifting towards the view of our forefathers who developed the same idea of health and disease several centuries ago.'

(Gentlemen! You have heard me patiently on two days. I thank you all immensely for the same. It will be an insult to the inexhaustible science of Ayurveda, if I dare to assume, that I have delivered to you an exhaustive lecture on the subject. Standing before you, now, I confess that I have no such pretensions. As I had told you in the beginning, when I was approached to deliver lectures on a subject which I love so much, in a language which is not to my liking, I felt very diffident. It was only my love for the subject and not any desire to make a spectacular performance that gave me courage to attempt this task. It may be that my performance was not to your expectations and it may even be that the standard was not suited to a distinguished gathering of the type assembled here. If so, I hope you will give due allowance for the execution in consideration of my good intentions. If I have succeeded by these two lectures in concentrating the minds, at the least for some time of a reasonable few to try to understand some aspects of this Science—Ayurveda and if at least some among them make efforts to perfect the study of this science and try to enhance its reputation by demonstrating its powers more to the enemies of this science than to its friends I have done some humble service to you and to 'Ayurveda'. Jai Ayurveda!

Jai Hind!

Astro Medical aspects of Conception (Garbhadharana).

By

DR. P. T. JAGANNADHA RAO, L.I.M.

TIRUPATI.

Conception is the process, by which the spermatozoa of a virile male is received into the womb of a fertile female for the purpose of fertilising the ovum. In a female, menstruation begins at puberty. The menstrual cycle occupies nearly 28 to 30 days from the day of the flow. It has two phases. The duration of the first phase of proliferation is about 14 to 16 days. In this period there is increased secretion of oestrin, causing proliferation and vascularisation of the uterine mucosa, which is prepared for the reception of the fertilised ovum. In the second phase progesterin, the secretion of the Corpus luteum, inhibits the action of the follicular hormone and maintains the ovum in the uterus 'if fertilised, as a guardian. In case of no fertilisation the superficial layers of the mucosa are cast off, setting in a fresh menstrual cycle and the corpus luteum degenerates.

Defective secretion of oestrin leads to imperfect development of the uterus, delayed onset and scanty irregular periods, including premature menopause. Excessive oestrin secretion leads to excessive menstrual loss. Oestrin is a stimulant to uterine action, governed by Mars. Progesterin has a sedative action, governed by Moon. Both these hormones are controlled by the anterior pituitary, which in its turn is balanced by emotion and planetary position. The modern scientist is still ignorant of the various relationships between the endo-

crines, which are naturally governed by the relative position of planets at the time of birth of the native. "Under the influence of the stellar gravitation the earth's surface undergoes the swinging oscillations, which reveal themselves in the oscillations of the senses or of intellect. Mankind, being a part of the earth's surface, swings along, in these rhythms. The human substances, being weak in this power of gravitation, begin to show the reactions. At the outset there stand the hormone glands whose secretions, as they are proved, measure very often in rhythms that are similar to the gravitational oscillations."—Ludwig Giesen.

Professor R. Thomaschek, till recently Director of the Institute of Physics at Dresden and Munich confesses. "As all Western scientists of my age, ignored and despised astrology, embraced by the materialism of my time and my surroundings. But a strong philosophical training and inclination prevented me from seeing in this materialism the true way of science. I never lost the conviction that there must be a spiritual ground for all physical happening. I think that the planets in their orbits and the man in his life are parts of one infinite happenings where all is linked together by one breathing principle."

“इन्द्रजैर्लं कुजोऽग्निर्लं कर्मसुप्तिरेव पितृ स्वाम् ।

एवं रक्ते क्षुभिते पितृन रजः प्रवर्तते कीदृक् ॥

एवं यद्भवति रजो गर्भस्य निमित्तमेव कथितं तत् ।
उपचयसंस्थे विपुले प्रतिमासं दर्शनं तस्य ॥”

—सारावलि:

“अनुपचयस्य चन्द्रे धरणीसुतवीक्षणद्वयं च ।
प्रथमरजोदर्शनतः शुभं भवति वनितानाम् ॥”

—श्री धर्म

Moon governs the watery element and the tissue blood; Mars governs the fire element and Pitta humour. The blood being activated by Pitta, menstruation results. When Moon is in Anupachaya sthanams, i.e. 1st, 2nd, 4th, 5th, 7th, 8th, 9th and 12th houses from the Janma Lagna and aspected to Mars, menstruation capable of fertilisation occurs. Menstruation: occurring with Moon in Upachaya sthanams, i.e. 3rd, 6th, 10th and 11th houses from Janma Lagna, aspected by Mars, is not capable of fertilisation. It is inferred that Mars controls the oestrogenic secretion and Moon the progestin, with their stimulating and sedative properties respectively menstruation, irrespective of such an aspect, is pathological and artificial, governed by other planetary relativity.

“ऋतुः स्वाभाविकः स्त्रीणां राजयः चोदसं स्मृताः ।
चतुर्भिरितैः सार्यमहोभिः सद्भिर्गर्हितैः ॥
तासामाद्याश्चतसस्तु निन्दितैकादशीचया ।
त्रयोदशी च चोषास्तु प्रज्ञास्तु दशरात्रयः ॥”

—श्री धर्म

“ऋतुस्तु द्वादशा निशाः पूर्वोत्तिष्ठोऽत्र निन्दिताः ।
एकादशी च..... ॥”

वाग्भट-शरीर-I-27

During the first phase of menstruation for the purpose of fertilisation of the ovum, the first four days, 11th and 13th days are to be avoided. According to some authors the first three days and the 11th are to be avoided.

“युग्मेषु तु पुमान् प्रोक्तो दिवसेऽवस्थाऽवस्था ॥”

सुश्रुत शरीर-III

“युग्मासु पुत्रा जायन्ते क्षियोऽयुग्मासु रात्रिषु ।”

भावप्रकाश

“युग्मासु स्यादयुग्मासु कन्यका ।”

वाग्भट-शरीर I-8

युग्मेषु दिवसेऽवस्थां भवत्युत्तरं रजः ।
संयोगं तत्र वा गच्छेत्सा पुमांसं प्रसूयते ॥
अयुग्मेषु दिनेऽवस्थां भवेदुत्तरं रजः ।
संयोगं तत्र वा गच्छेत्सा तु कन्यां प्रसूयते ॥

विदेह बचन

Ovum, fertilised on the 4th, 6th, 8th, 10th and 12th days, develop into a male foetus and that fertilised on the 5th, 7th, 9th and 11th days, develop into a female foetus. This is due to the deficient and efficient feminine element in the ovum respectively.

उपचय भवने शतशतद्वयो गुरुणा सुदृढि रचयः स्त्री ।
पुसा करोति योगं विशेषतः शुक्रसंरुहः ।

सारावलि:

In the case of a male, if Moon is in Upachayam (3, 6, 10 and 11) and aspected by Jupiter or friendly planets, more so by Venus, the spermatozoa gains the power of fertilising the ovum. The age factor is also to be considered. A girl upto the age of 19 is called a Bala. Though menstruation occurs from the age of 12, the development of the genitals and perfection of the endocrine secretions would be complete by the 16th year in an average female. From 16th to 36th year of age a woman is called Tharuni. In this period all the parts of the body are expected to be fully developed. This period is the bloom of life. From 36th to 50th year Adhirudha is the term applied. Decay of reproductive power sets in due to wear and tear. Signs of senility and

endocrine imbalance begin to appear. From the 50th year a woman is called Vriddha and declared unfit for coitus under any circumstance.

“पूर्णपोदश वर्षा स्त्री पूर्णविशेन संगता ।”

वाग्भट-शरीर-I-8.

The minimum age of a girl and a man for a conceivable coitus is considered to be 16 and 20 respectively. The maximum age depends on the ushering in of climacteric at an average age of 40 and 50 respectively.

“शुक्रार्कं भौमशशिभिः स्वांशोपचये स्थितैः सुरेड्ये वा ।

धर्मोद्धारमजस्ये बलवति गर्भस्य संभवो भवति ॥
उपचयगो रविशुक्रौ बलिनौ पुंसः स्वमंशकं प्राप्नो ।
युवतेर्वा कुजचन्द्रौ यदा तदा गर्भे संभवो भवति ॥”

—सारावलि:

At the time of coitus (Nisheka lagna), if Sun, Moon, Mars and Venus were to be in the Upachaya-sthanams (3, 6, 10 and 11) in Swamsa; Or if Jupiter is well placed in the 1st, 5th and 9th houses, fertilisation of the ovum is expected certainly. Sun and Venus favour male off-spring and Moon and Mars favour female off-spring, if they are in Upachaya-sthanams in swamsa. Sun gives virility and Venus testosterone. Moon gives femininity and Mars oestrogen. Venus represents watery element and Mars fire element.

“सौम्यं शुक्रं, भार्तेवमाग्नेयम्”-सुश्रुत

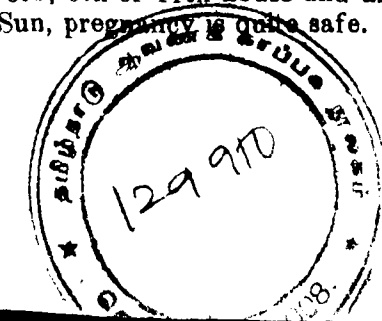
Venus indicates phlegmatic diathesis and Mars hepatic diathesis. Hence dietetic restrictions are indicated to maintain the endocrine balance for conception and if possible make good the deficient virility and fertility in man and woman due to the planetary position.

“नरः विषाक्षीराज्यै मधुरौषधसंस्कृतैः ।
नारीं तैलेन मधैश्च पित्तलेः समुपाचरेत् ॥”

वाग्भट-शरीर-I.

A man becomes impotent, if Sun, Mercury and Saturn are placed together in conjunction in any house. Mercury in Leo, aspected by Mars and Venus in Capricorn are the other two positions causing impotency. In such cases the spermatozoa would not be completely able to fertilise the ovum. A woman becomes sterile, if Mercury and Saturn happen to be in conjunction in the 7th house from Lagna. The presence of Saturn alone in the 7th house or even the malefic aspect causes sterility. In all such cases treatment is only palliative but not radical.

An over-loaded or empty stomach, juvenility, senility, pregnancy and disease, physical or mental, are contraindications for an eventful coitus. The physical and meta-physical diathesis of the off-spring depend on the parental balance at the time of coitus. The fertilised ovum becomes an embryo and develops into a foetus in a course of approximately 10 months. During this period of 10 months, the embryo or foetus is governed by Venus, Mars, Jupiter, Sun, Moon, Saturn, Mercury, Lord of Lagna of coitus, Moon and Sun in order each month. Any defeated (Parajitha) planet, Sun and Moon in malefic combination, cause abortion in their respective months. If Mars and Saturn happen to be in coitus Lagna or Moon in Lagna and aspected by Mars or Saturn, abortion is inevitable. If Lagna or Moon is in conjunction with benefic planets, or benefic planets placed in the 2nd, 4th, 5th, 7th, 9th or 10th house or malefic planets placed in the 3rd, 6th or 11th house and aspected by Sun, pregnancy is quite safe.



The Malabar Special Ayurvedic Treatments

By

DR. K. K. NAMBIAR, H. P. I. M.

(Continued from Jan. Issue.)

Dhara chatti:—The next important apparatus for the special treatment is Dhara Chatti. In this, the required quantity of Dharadravyam or Sneham is stored or refilled every now and then. For this a kettle-like vessel known as "Karakam" is used. It is made as follows:—

स्वर्णयुक्तमकोहृतम् करकोमुखसंयोज्योऽन्नतश्चाकान्तु-
कनिष्ठिकांगुलिपरिणाहोन्मिर्तरोमिणः । द्विसंयोजितो
विधाय हृत्तिवामभ्यस्थद्व्यधोगच्छतिरयोर्ध्वकंस्यविचरः
कर्तुः शिरस्सेचने ॥

The "Karakam" known as kindi in Malayalam is made out of gold, Silver, or any other good metals. It may also be of ordinary clay. The size of the tubular portion of the vessel at its opening should be equal to that of the little finger of the patient. The capacity of the vessel is about two pras-thams, i. e., about four bottles of 24 ozs. each. Through the tubular opening threads are passed and through these threads the medicated water or oil falls down on the head or body of the patient when the vessel is suspended just above the region of the body where dhara is required.

In practice, the use of "Karakam" for dhara treatment has been found to

be very inconvenient and this has been substituted by a rounded vessel without any tubular attachment. This may be made out of some good metal or clay (a well-burnt earthen vessel) is now-a-days used by many physicians). The capacity of the vessel is two pras-thams and should have thick edge to pass round a string to suspend the same. At the centre of the vessel a hole is made and through that hole strings are passed for regulating the flow of oil or liquid used for Dhara.

Another necessary upakaranam is a serrated metal cup or cocoanut shell, the surface of which has been made smooth by removing the external fibres completely. The edges of the cup or shell are uniformly serrated to make the flow of the liquid or oil in a uniform speed. At the bottom of the cup or shell a hole is made equal to the diameter of the hole already made at the bottom of the vessel (Dhara Chatti). A few threads are taken together and one end of such a thread is tied to the centre of a small twig or a rod of one to two inches in length. The other end of the thread is passed through the hole of the serrated cup or cocoanut shell. When the apparatus is set up for the treat-

ment, this cup or shell is placed inverted inside the Dhara Chatti covering the hole in it. The free end of the threads is then pulled out of the hole in the Chatti and the length of the threads is adjusted when the vessel (Chatti) is suspended just above the forehead of the patient.

This sort of arrangement is made to maintain a uniform flow of Dhara dravyam (liquid or oil) from the suspended vessel to the forehead of the patient when the vessel is moved to and fro. The serrations in the metal cup or shell direct the liquid or oil from the vessel through the threads in a regular stream.

The other upakaranams required for the treatment are the following:

A Pillow—A small pillow about 8 to 12 inches in length with a covering made of oil-cloth is used. This is necessarily required to prevent pain or strain to the neck or head when the patient lies over the wooden plank for one to one and a half hours.

A band of cloth—For this an ordinary cloth may be used. It should be rolled into a band of about half to one inch in thickness and having sufficient length to be tied round the forehead over the eyebrows so that the whole forehead may be exposed for Dhara. The purpose of tying such a cloth around the head is to prevent the liquid or oil being flown into the eyes or being mixed with the oil used for the body when the treatment is actually conducted.

In addition to the above, we require one basin, a rounded enamel vessel, two trays, two towels, and greengram powder also for the special treatment. The basin is used for collecting the Dharadravyam when it falls down from the head of the patient and the rounded enamel vessel is required to pour the same back into the Dhara Chatti every now and then. The trays are utilised for collecting oil from the body of the patient and the wooden plank by means of sponge or cotton and pouring the same again over the body of the patient after making it luke-warm. One towel is used for wiping out the water from the head and body of the patient after hotwater both is over and the other towel is required to cover the head as soon as the wiping is completed to prevent catching cold. The oil from the head and body is removed or washed off by green gram powder. Soap should not be used as it is likely to produce a sort of grease-like substance caused by its lather being mixed with the oil. This substance may block the pores and obstruct the free flow of perspiration. Soap-nut powder also is not good for it is very rooksha and it may completely remove the oil from the body resulting in loss of snehanam. Hence green gram powder is generally recommended by physicians for removing the oils during the bath after the special treatments.

Hot water is used for bath but some physicians favour using medicated water and thus prescribe Chathuksheeri

twak, Pancha Valkam, Thriphala, Bilwa Patra, Nirgandi Patra, etc. We may use any other drugs suitable to the vitiated doshas and diseases. Some medicinal powders as Rasnadi Choorna, Kachooradi Choorna are also necessary to rub the scalp when the bath is over to prevent catching cold or other minor affections that may be caused to some patients who are not accustomed to take bath daily.

Oils for the head and body are selected according to the disease and vitiated dosha. The oils commonly used are the following:—

Oils for the head:—Bhringamalaka thailam, Ksheerabala thailam, Triphaladi thailam, Chandanadi thailam, Manjeshthadi thailam, Baladhatriyadi thailam, Bala Gudichiyadi thailam, Asanavilvadi thailam, Masha thailam, Maha Masha thailam, etc.

Oils for body:—Pinda thailam, Amavata thailam, Balaswagandhadi thailam, Lakshadi thailam, Rasa thailam, Sahacharadi thailam, Narayana thailam, Prabhanjana Vimardhana thailam, etc.

Some oils prescribed for the head such as Karpasasthyadi, Maha masha thailam etc., are used for the body also. Purgative oils like Hingutriguna, Dhatree, Sukumara thailam, and Honey Saidhava and other drugs for Vasthi are also to be stocked.

The Ghrithams such as Indukantha, Guggulu Thikthaka, Sukumara, Brihat Chagalyadi, Saraswata, Maha Mayoora etc., and Arishtams such as Dasamoolarishta, Aswagandharishta, Balarishta, Saraswatarishta etc., are also commonly used during the special treatments.

Among the Kashayas the following are required.—Gandharvahastadi, Rasnadi, Sahacharadi, Vathashtavargam, etc. Some guggulu preparations like Yogaraja guggulu, Amritha guggulu, Kaishora guggulu and a few minerals preparations as Lohasowveera, Vathagajankusa, Vatharakshasam, Vathavidwamsini etc., are also to be made ready before the treatment is commenced.

I have enumerated elaborately all the upakaranam required and the various oils and internal medicines generally used during the special Malabar treatments. It is always advisable to keep the above mentioned medicines under stock before a physician commences any one of the special treatments. Of course the list of medicines shown is very elaborate but one has to select the suitable ones from it to the individual cases.

I will now proceed to describe the technique of conducting 'dhara'.

(to be continued)

The Theory of Panchabhootas

By

AYURVEDACHARYA DR. M. VISWESWARA SASTRY, H.P.I.M.

I PROLOGUE

A thorough knowledge of the Panchabhoota theory in all its aspects would help to appreciate and utilize its bearing on the function of the human machinery based on the Thridosha Sidhantha.

The five Maha Boothas stand for a classification of substances on the basis of their constitution. They are analogous to the three states of matter, viz. Solids,

Liquids and Gases and, in forms, addition to the "Radiant Matter" and "Ether." Thus, here, the states of matter are declared as being five: viz. Prithvi, Ap, Thejas, Vayu and Akasa, corresponding to the five senses of perception by which each of these is appreciated. They are the senses of Smell, Taste, Vision, Touch and Hearing as shown in the following table.

States of matter	Bhutas	The relative sense organs
Solids	Prithvi	Sense of smell
Liquids	Ap	Sense of taste
Gaseous	Vayu	Sense of touch
Radiant matter	Agni	Sense of sight
Ether	Akas	Sense of hearing

An ancient author defined bhoota as that which has got the quality of being grasped by the sense organs. Prithvi and others are only groups possessing the particular qualities of those bhootas. Some are of opinion

that the Bootas are only the categories like those of Aristotle and to compare them with chemical elements or physical states of matter, is not correct.

The question that is often asked is, 'why are the bhootas only five in num-

ber?" The solution is very easy if the body and the universe are taken into consideration. It is the easiest way to classify the objects into five classes in conformity with the five kinds of knowledge of appreciation through the five special sense organs.

Mr. J. W. Mellor says that the theory of Maha bhootas was prevailing in ancient times not only in India but all over the world.

"This four element theory (excluding Akasa) is one of the oldest attempts to classify the multitudinous forms of matter which make up the world The Hindu Philosophers had previously added a fifth element.....the theory in existence a couple of centuries ago is now dead." (Modern Inorganic Chemistry) regarding the exact nature of these five Mahabhootas, according to Hindu Scientists, there has been some differences of opinion among different schools of thought.

From the standpoint of Nayyayikas (the Hindu logicians) these five Mahabhootas, as are said to be the five elemental beings. They define a Bhoota as a substance having a special quality which could be perceived by one or the other

of the five sense organs. The first four Bhootas viz. Bhumi Ap, Tejas and Vayu are of two varieties each, the first being Nitya (Eternal) and the other Anitya (transitory). The eternal one is described as Paramanurupa i.e. represented by atoms, while the transitory variety is material in its form that can be perceived by the respective sense organs. These are again classified into three groups each viz. (1) Sareera (the place & form) of the bhoota (2) Indriya (the sense organ related to it) and (3) The Vishaya (the object of perception).

Thus it may be seen that there is certain relationship between the object, the sense organ and the Maha Bhoota and it is perhaps the reason for classifying the substances into five different categories from the stand point of their accessibility to perception by various sense organs.

This view is also upheld by the Sankya school which is represented in the following table.

The table indicates the constitution of the five Maha Bhootas. As already explained, the Sankyas attribute the origins of the Maha Bhootas to the five tanmatras as explained below:

Name of the Mahabhoota	Tanmatras giving rise to the Mahabhootas	The Supporting Tanmatras.
Akasa	Sabda Tanmatra possessing the property of sound and its vibrations	---
Vayu	Sparsa Tanmatra possessing the property of the sense of touch	Sabda Tanmatra
Agni or Tejas	Rupa Tanmatra possessing the property of light and heat energy	Sabda and Sparsa Tanmatras
Ap or Jala	Rasa Tanmatra possessing the property of Taste	Sabda Sparsa and Rupa Tanmatras
Bhoomi or Prithvi	Gandha Tanmatra possessing the property of Smell	Sabda Sparsa Rupa and Rasa Tanmatras.

From this it is observed that each Mahabhoota is formed of the five tanmatras or subtle Bhootas. Paramanus are considered by some Hindu Scientists as the tanmatras which give rise to the corresponding Mahabhootas. There is yet another school of thought expounding the theory that the Maha bhootas, Akasa, Vayu, Tejas, Ap and Prithvi are derived one from the other in the above order, the latter Bhootas possessing the qualities of the former ones also, in addition to their own.

This view is held by Vedantins who follow the Panchekarana principle, state that the Mahabhoota Bhumi is composed of four parts of Bhoomi Bhoota and one part each of the other four Bhootas. The Mahabhoota Vayu is similarly composed of four parts of Vayu Bhoota and one part of each of the others. The other Mahabhootas are also formed similarly. The following table having Ak, V T, Ap and B as symbols for Akasa, Vayu, Tejas, Ap and Bhumi for the five Mahabhootas respectively may be taken the purpose.

Ak.—Ak 4 + (V. 1, T. 1, Ap. 1, and B. 1).

V.—V. 4 + (Ak. 1, T. 1, Ap. 1, and B. 1).

T.—T. 4 + (Ak. 1, V. 1, Ap. 1, and B. 1).

Ap.—Ap. 4 + (Ak. 1, T. 1, V. 1, and B. 1)

B.—B. 4 + (Ak. 1, V. 1, T. 1, and Ap. 1)

It will be interesting to note in this connection, the conclusions arrived at the conference of Scholars of Ayurveda, Modern medicine and Scientists held in 1947 under the auspices of the Chopra Committee about the Pancha Mahabhootas. They are as follow.

"The Ayurvedic Anatomy, Physiology Pathology and treatment including Pharmacology are based on the Panchabhoota Theory. Though it is said in Ayurveda that the body is composed of Doshas, Dhatus and Malas, it is clear that even those three are formed of the five Mahabhootas. Thus even in materia medica the study of the constituents of a drug viz: Rasa (Taste) Guna (Physical property) Virya (potency) and (Vipaka transformation) is based on the Pancha Mahabhoota Theory,

Biochemical changes of food after digestion are based on the Pancha Mahabhootha theory.

The Mahabhootas are five in number and they are Akasa, Vayu, Agni, Jala and Bhumi. Of these Akasa possesses Sabda as its principle quality; Vayu-Sparsa, Agni, Rupa, Jala, rsasa and Prithvi, Gandha.

The main and additional properties of the five Mahabhootas are:

(i) Akasa possesses only Sabda guna.

(ii) Vayu has Sparsa guna as its own property and Sabda guna as additional property due to its relation with Akasa.

(iii) Agni has Rupam for main and Sabdam and Sparsa as additional ones this being evolved from them.

(iv) Jala has rasa for main and Rupa, Sabda and Sparsa as additional gunas, this having been born from the above three.

(v) Prithvi has Gandha as its main having the rasa rupa sparsa and sabda as additional qualities.

The perceivable qualities of the five Mahabhootas as explained in Ayurveda are Kharatwa (hardness) to Bhumi, Dravatwa (fluidity) to Jala, Chalatwa

(mobility) to Vayu, Ushnatwa (heat) to Tejas and Apratheeghata (permeating) to Akasa.

The relation between the Indryas and the Mahabhootas:

i. Akasa is responsible for the Srothrendriya. Hence it is called Srothrendriya Dravyam.

ii. Vayu-Sparsanendriya (Sparsanendriya Dravyam.)

iii. Tejas - Darsanendriya (Darsanendriya Dravyam.)

iv. Jala-Rasanendriya ... (Rasanendriya Dravyam.)

v. Prithvi-Ghranendriya ... (Ghranendriya Dravyam.)

The relation of Gunas to Mahabhootas:

Akasa is predominantly Satwa Guna in nature

Vayu is Predominantly Rajo Guna
Tejas is " Satva & Rajoguna
Jala is " Satva & Tamo "
Prithvi is " Tamo "

The relation of Mahabhootas to Doshas:

Akasa and Vayu mainly constitute Vatha
Tejas and Jala " Pitha
Jala and Prithvi " Kapha

In the subtle state of Mahabhootas viz - the Paramanu state of the Nyaya Viseshikas and the tanmatra state of the Sankyas, the Prithvi is said to

contain Gandha guna, Jala Rasa-guna, Tejas-Rupa guna, Vayu-Sparsa guna, and Akasa-Sabda guna. In that state these are not perceivable by the naked sense organs but could only be known by inference.

As explained above it could be understood that all the substances of Animal, Vegetable and mineral kingdom are formed of the panchaboota combinations only.

As the whole universe is formed by the Mahabhootas any substance which is nothing but a part of the universe is traceable to the Pancha Mahabhootas.

The ninety two elements of the modern scientists are also formed out only of these Pancha Mahabhootas as they possess nothing more than the properties of the Mahabhootas. viz: Khara Drava, Ushna, Chala, and Apratheeghatha.

The origin of the Dravya (substance):

Prithvi is the adishtana or base for the existence or formation of any dravya or substance.

Jalaboota is the Yoni or the Causative factor for holding the particles of the Prithvi together and nourishing it.

The influence of Tejas, Vayu, and Akasa act to provide it with individuality and growth, as for instance the Tejas causing maturity and lustre, the Vayu bestowing on it movement or mobility and Akasa in producing Spaces in between the molecules of the substances.

The Panchabhoota Theory in Relation to Ayurveda

EFFECTS OF PANCHABHOOTAS ON THE HUMAN SYSTEM

I PARTHIVA DRAVYAM provides to the human system.

- (1) Weight (Heaviness) —
- (2) Sturdiness — Sthiratwam
- (3) Compactness — Snigdatha
- (4) Growth — Upachaya.

II APYA DRAVYAM Provides to the human system.

- Greasiness — Snehana
Stickiness — Vishyanda
Moisture — Kleda
Satisfaction — Prahladana
Unison — Bandha

III AGNEYADRAVYAM Provides to the human system —

- Warmth — Daha

Lustre — Bha

Complexion — Varna

Shining — Prakasa

Digestion — Pachanam

IV VAYAVYA DRAVYAM Provides to the human system

Dryness — Roukshya

Levity — Laghava

Clearness — Vaisadya

Movement — Vichara

Exhaustion — Glani.

V NABHASA DRAVYAM Provides to the human system.

Clearness of cavities — Soushiryam

Levity — Laghavam.

THE GUNAS (INHERENT QUALITIES) OF MAHA BHOOTAS

PRITHVI	AP	TEJAS	VAYU	AKASA
Kathina		Ushna	Sookshma	Slakshna
Guru	Guru	Theekshna	Rooksha	Sookshma
Sthoola	Seetha	Sookshma	Khara	Mridu
Sthira	Sara	Rooksha	Seetha	Visada
Sandra	Drava	Khara	Laghu	
Manda	Manda	Laghu	Visada	
Khara	Snigdha	Visada		
	Pichila			

From this it may be seen that the knowledge of the Bhootic contents of the various dietetic and medicinal articles will be useful for a physician to deal with individuals both in health and disease. During health this will be useful in selecting proper articles of food to supply proper nourishment to the system, while in ill-health it will assist him in selecting suitable drugs for using as medicine and diet.

II

Estimation of the Pancha Bhouthic value of Food Articles

Estimation of the nutritive value of Food articles according to the Pancha Bhoota theory.

The Pancha Maha Bhootas being responsible for the formation of both the bodily constituents as well as food articles it is explained that the Pancha Maha Bhoota portions of the food get converted into the various constituents of the body by the action of the Jataragni, or the digestive principle of the body. Though this process is going on within the body throughout the life of an individual it is essential to gauge the quantities of the Pancha Bhouthic portions of the food articles that are required for replenishing the daily loss of energy and waste. Sufficient quantity of energy can be got by an individual only by an adequate quantity of food and its digestion. Though the food articles may vary in use in different parts of the world it is necessary to arrive at a common formula for gauging the sufficiency of nutritive requirements to the system. For this purpose knowledge of the proportions of of each Bhoota contents in food articles become necessary on the basis of Panchaekaranam that a Bhoota is formed by the combination of 50% of the pradhana Bhoota by which it is named and the remaining half of the 50% of the Bhoota portion formed by the remaining four Bhootas at 12½% of each. Each Mahabhoota is allotted 1000 points or units for easy calculation.

The nutritive and therapeutic value of the food and other articles is estimated from the Rasa (taste) and guna (the physical properties) found in

them as suggested by Susrutha. The estimation of the Bhouthic value of Rasa and Guna is carried out on the basis of the Bhootas responsible for the production the Rasa of and Guna in an article. Then the Rasa and Guna in the different articles of the specimen diet prescribed by Vagbhata, are taken and their pancha bhouthic value evaluated applying the formula worked out on the above basis. Totalling up the points or units allotted to each article of diet under each head of the Bhoota the percentage of the Bhoota content of the particular article of diet is worked out.

Taking the articles of the specimen diet prescribed by Vagbhata and their quantities fixed up as per the requirement of an adult individual of moderate work and exertion according to modern physiological tables the percentage of the Bhouthic contents of this quantity of food is worked out (taking into account of the Bhouthic contents of each of the said articles as already worked out.) Thus the daily intake of the various Bhoota portions of an individual is calculated, taking up the individual Bhoota portion in all.

On the same basis the Bhouthic contents of other articles of diet may also be worked out which would serve as a ready reckoner to select articles in order that the requisite supply of the Pancha Bhouthic portions of the body in it is maintained.

TABLE I

This table shows the distribution of one thousand units or points allotted to each of the mahabhoota and how the main or the pradhanabhoota is allotted 50% i.e., 500 points and the rest 12% each i.e., 125 points.

STRUCTURE OF MAHABHOOTAS DESCRIBED ON THE BASIS OF PANCHEEKARANAM.

	Prithvi	Ap	Tejas	Vayu	Akasa
PRITHIVI	500	125	125	125	125
AP	125	500	125	125	125
TEJAS	125	125	500	125	125
VAYU	125	125	125	500	125
AKASA	125	125	125	125	500

TABLE II

This shows the strength of each bhoota in each rasa based on the combination of the two bhootas that are responsible for the formation of that Rasa. The total number of units of each bhoota shown against each rasa indicates the strength of the individual bhootas in each Rasa.

STRUCTURE OF RASAS.

		Prithvevi	Ap.	Tejas	Vayu	Akasa
MADHURA	Prithvi	500	125	125	125	125
	Ap	125	500	125	125	125
	Total	625	625	250	250	250
AMLA	Tejas	125	125	500	125	125
	Prithvi	500	125	125	125	125
	Total	625	250	625	250	250
LAVANA	Ap	125	500	125	125	125
	Tejas	125	125	500	125	125
	Total	250	625	625	250	250
KATU	Akasa	125	125	125	125	500
	Vayu	125	125	125	500	125
	Total	250	250	250	625	625
THIKTHA	Agni	125	125	500	125	125
	Vayu	125	125	125	500	125
	Total	250	250	625	625	250
KASHAYA	Prithvi	500	125	125	125	125
	Vayu	125	125	125	500	125
	Total	625	250	250	625	250

TABLE III

Here again the Bouthic strength of each guna is fixed basing on the bhootas inheriting the gunas as for example Guru guna is the one mainly found in Bhoo—Bhoota while the dravyam formed by Ap will also have Guru guna. Thus if a dravya has Guru Guna the number of points for Prithivi and Ap—bhootas are added and for gunas—common for 3 bootas the number of points and for all the three Bootas are added—and the strength of the same is marked as 1, 2 or 3, at the end according as 1, 2 or 3, Bhoota counts are added.

STRUCTURE OF GUNAS

	Prithvi	Ap	Tejas	Vayu	Akasa	
GURU	625	625	250	250	250	2
LAGHU	250	250	625	625	250	2
MANDAM	625	625	250	250	250	2
THEEKSHNAM	125	125	500	125	125	1
HIMA	125	500	125	125	125	1
USHNAM	125	125	500	125	125	1
SNIGDHA	125	500	125	125	125	1
ROOKSHAM	250	250	625	625	250	1
SLAKSHNA	125	125	125	125	500	1
KHARAM	250	250	625	625	250	2
SANDRAM	500	125	125	125	125	2
DRAVAM	125	500	125	125	125	1
MRIDU	250	625	250	250	625	2
KATINA	500	125	125	125	125	1
STHIRAM	500	125	125	125	125	1
CHALAM	125	500	125	125	125	1
SUKSHMA	375	375	750	750	750	3
STHOOLAM	500	125	125	125	125	1
VISADAM	375	375	750	750	750	3
PICHILAM	125	625	125	125	125	1

TABLE IV

Contains the list of articles mentioned in the specimen diet prescribed by Vagbhata with its English equivalents, and the quantity of these articles required for an individual taken from the Modern physiological tables. The quantity is fixed in grammes and tolas both for Vegetarian and non-vegetarian diet.

VEGETARIAN AND NON-VEGETARIAN DIET

Sanskrit Name	English Name.	VEGETARIAN		NON-VEGETARIAN	
		Grammes	Tolas	Grammes	Tolas
Sali & Shashtika	Rice	225	18.9	225	
Godhooma	Wheat	170	14	110	

Sanskrit Name	English Name.	VEGETARIAN		NON-VEGETARIAN	
		Grammes	Tolas	Grammes	Total
Yavam	Barley	40	3 1/3		
Hareethaki	Fruits	12	1		
Amalaki	"	12	1		
Draksha	"	30	2 1/2		
Dadimam	"	30	2 1/2		
Patolam	Vegetables	110	9		110
Mudgam	Dhall	85	7		60
Sarkara	Sugar	40	3 1/3		2.5
Ghritham	Ghee	40	3 1/3		1.5
Kahiram	Milk	450	37 1/2		60
Madhu	Honey	40	3 1/3		—
Saindhavam	Salt	40	3 1/3		2.5
Hamsodakam	Water	2400	200		
Matsya	Fish		110		
Jangala MAMSA	Arid Meat		110		
Kukkuta Andam	Eggs			(2) Nos	
Avayavas	Other Organs			60	
				80	

TABLE V

Here the number of points of each bhoota in each Guna and Rasa of a dravyam mentioned in Table IV is noted down, the aggregate points of each Bhoota is noted, and the percentage of each Bhootamsam is worked out for example Sali has got Madhura Rasa, Kashaya Anuraso Snigdha, Laghu, and Seetha Gunas. Allotting the points for all the 5 properties we get on adding that in Sali dravyam of 8000 units we find 1750 units of P, 2125 of Ap, 1375 of Ag, 750 of N, 1000 of Ak. This works out to 21.875% of Prithivi, 26.592 of Ap, 17.187% of Ag, 12.18% of Vayu, and 12.5% of Akasam in the dravyam Sali

Similarly the percentages of the Bhootamsam are worked out for all the dravyam.

Pancha Bhoothic value of the Specimen Diet.

	Prithivi	Ap	Tejas	Vayu	Akasa	
1. SALI						
MADHURAM	625	625	250	250	220	
KASHAYAM	625	250	250	625	250	
SNIGDHAM	125	500	125	125	125	
LAGHU	250	250	625	625	250	
SEETHAM	125	500	125	125	125	
	1750	2125	1375	750	1000	8000
	21.875	26.595	17.187	12.18	12.5	
	21.9					

2. GODHOOMAM	MADHURAM	625	625	950	250	250	
	KASHAYAM	625	250	250	625	250	
	GURU	625	625	250	250	250	
	SNIGDHAM	125	500	125	125	125	
	SEETHAM	125	500	125	125	125	
		2125	2500	1000	1375	1000	8000
3. YAVAM	MADHURAM	625	625	250	250	250	
	KASHAYAM	625	250	250	625	250	
	GURU	625	625	250	250	250	
	SEETHAM	125	500	125	125	250	
	ROOKSHAM	250	250	625	625	250	
		2250	2250	1500	1875	1125	9000
4. SARKARA	MADHURAM	625	625	250	250	250	
	KASHAYAM	625	250	250	625	250	
	GURU	625	625	250	250	250	
	SEETHAM	125	500	125	125	250	
	SNIGDHAM	125	500	125	125	122	
		2125	2500	1000	1375	1000	8000
5. PATOLAM	MADHURAM	625	625	250	250	250	
	SNIGDHAM	125	500	125	125	125	
	USHNAM	125	125	500	125	125	
	LAGHU	250	250	625	625	250	
		1125	1500	1500	1125	750	6000
		18.75	25%	25%	18.75	12.5	
6. MUDGAM	MADHURAM	625	625	250	250	250	
	KASHAYAM	625	250	250	625	250	
	SEETHAM	125	500	125	125	125	
	LAGHU	250	250	625	625	250	
		1750	2125	1375	1750	1000	8000
		21.875	26.5	17.2	21.875	12.5	
7. SAIN-DHAVA	LAVANAM	250	625	625	250	250	
	MADHURAM	625	625	250	250	250	
	SEETHAM	125	500	125	125	125	
	MRUDU	250	625	250	250	625	
	SOOKSHMA	375	375	750	750	750	
	SNIGDHAM	125	500	125	125	125	
		1750	3250	2125	1750	2125	
		15.9	29.5	19.3	15.9	19.3	

8. GHRITHAM	MADHURAM	625	625	250	250	250	
	SEETHAM	125	500	125	125	125	
	MRUDU	250	625	250	250	625	
	SNIGDHAM	125	500	125	125	125	
	GURU	625	625	250	250	250	
		1750	2875	1000	1000	1375	8000
9. KSHEERAM	MADHURAM	625	625	250	250	250	
	SNIGDHAM	125	500	125	125	125	
	SEETHAM	125	500	125	125	125	
	GURU	625	625	250	250	250	
		1500	2250	750	750	750	6000
		25	37.5	12.5	12.5	12.4	
10. MADHU	MADHURAM	625	625	250	250	250	
	KASHAYAM	625	250	250	625	250	
	ROOKSHAM	250	250	625	625	250	
	LAGHU	250	250	625	625	250	
	SEETHAM	125	500	125	125	125	
		1875	1875	1875	2250	1125	9000
11. DADIMAM	AMLAM	625	250	625	250	250	
	MADHURA	625	625	250	250	250	
	USHNA	125	125	500	125	120	
	KASHAYAM	625	250	205	625	250	
	ROOKSHAM	250	250	625	625	250	
		2500	1750	2875	2500	1375	11000
12. DRAKSHA	MADHURAM	625	625	250	250	250	
	KASHAYAM	625	250	250	620	250	
	SEETHAM	125	500	125	125	125	
	SNIGDHAM	125	500	125	125	125	
	GURU	625	625	250	210	250	
		2125	2500	1000	1375	1000	
13. HAREE-THAKI	KASHAYAM	252	650	250	625	250	
	MADHURAM	625	625	250	250	250	
	USHNAM	125	125	500	125	125	
	ROOKSHAM	250	250	625	625	250	
	LAGHU	250	250	625	625	250	
		1875	1500	2250	2250	1125	9000
		20.83%	16.6%	25%	25%	12.5%	

14. AMALAKI	KASHAYAM	625	250	250	625	250	
	AMLAM	625	250	625	250	250	
	GURU	625	625	250	250	250	
	SEETHAM	125	500	125	125	125	
	ROOKSHAM	250	250	625	625	250	
		2250	1875	1875	1875	1125	9000
		25%	20.83%	20.83%	20.83%	12.5%	
15. HAMSO- DAKAM	MADHURAM	625	625	250	250	250	
	SEETHAM	125	500	125	125	125	
	SNIGDHAM	125	500	125	125	125	
	LAGHU	250	250	625	625	250	
		1125	1875	1125	1125	750	
		18.75	31.25	18.75	18.75	12.5	Grms
		21.9%	26.6%	7.2%	21.9%	12.5%	

TALBE VI

Here taking the quantity of each dravyam mentioned above the actual quantity of Bhootamsams in each dravyam is worked out as 22% of 225 grammes, sali of Prithiviamsam equal to 56.3 grammes, 26.5% of salies Apyamsam that is equal to 67.8 grammes of Ap, etc., in a total of 225 grammes of the dravyam, similarly the Bhootams are in each dravyam is fixed quantitatively.

Dravyam	Quantity Grammes	Tolas	Prithivi	Ambu	Tejas	Vayu	Akasam
1. SALI	21		22	26.5	17	22	12.5
	225	19	5	6 ;	37	50	28
			26.6%	31.2%	12.5%	17.2%	12.5%
2. GODHOOMAM	170	14	27	31	12.5	17	12.5
			45.9	52.7	21.25	28.9	21.25
			26.6%	31.2%	12.5%	17.2%	12.5%
3. YAVAM	40	3 1/3	27	31	12.5	17	12.5
			10.8	12.4	55	68	55
			20.8%	16.6%	25%	55%	12.5%
4. PATOLAM	110	9	19	25	25	19	12.5
			21	27	27	21	14
			21.9	26.5	17.2	21.9	12.15
5. MUDGAM	85	7	22	26.5	17	22	12.5
			22.7	22.5	14.4	18.7	10.6
			26.6	31.2	12.5	17.2	12.5
6. SARKARA	40	31/3	27	31	12.5	17	12.5
			10.8	12.4	e	6.8	5
			15.9	21.5	19.3	15.9	19.3

7. SAINDHAVAM	40	31/3	16	30	19	16	19
			6.4	12	7.6	6.4	7.6
			25%	37.5	12.5	12.5	12.5
8. GHRITHAM	40	31/3	21.9	35.9	12.5	12.5	17.2
			22	36	12.5	12.5	17.2
			18.8	14.4	5	5	6.8
9. KSHEERAM	450	37 1/2	1112.5	168.75	56.25	56.25	56.25
10. MADHU	40	31/3	21	21	21	25	12
			8.4	8.3	8.3	10	5
			22.9	15.9	26.9	22.7	12.5
11. DADIMAM	30	2 1/2	23	16	27	22.5	
			6.8	4.8	8.1	6.8	3.75
			26.6	31.2	12.5	17.2	12.5
12. DRAKSHA			27	31	12.5	17	12.5
			87	9.3	3.75	5.1	3.75
			25%	20.8%	20.8%	20.8%	12.5%
13. HAREETHAKI	12	1	21	16.5	25	25	12.5
			2.52	1.97	3	3	1.5
			18.75	25%	25%	18.75	12.5
14. AMALAKI	12	1	25	21	21	21	12
			3	2.5	2.5	2.5	1.5
			18.75	31.25	18.75	18.75	12.5
15. HAMSODAKAM	2400	200	19	31	19	19	12
			456	744	456	456	288
							Grms.

TABLE VII

Gives separately the quantitative estimate of the respective Bhootamsams in each of the dravyams mentioned in the list of articles prescribed in the specimen diet. And the total quantity of the individual Bhootamsams that one takes during a day by consuming the said articles in the prescribed quantity.

DRAVYAM	Prithvi	Ap	Tejas	Vayu	Akasam
SALI	50	60	37	50	28 Grams.
GODHOOMAM	45.9	52.7	21.25	28.9	21.25 Grams.
YAVAM	10.8	12.4	5	6.8	5 Grams.
PATOLAM	21	27.0	57.0	21	14 Grams.
MUDGAM	18.7	22.5	14.4	18.7	10.6 Grams.
SARKARA	10.8	12.4	5	6.8	5 Grams.
SAINDHAVAM	6.4	1.2	7.6	6.4	7.6 Grams.
GHRITHAM	8.8	14.4	5	5	6.8 Grams.

KSHEERAM	112.5	168.75	56.25	56.25	56.25	Grams.
MADHU	8.4	8.3	8.3	10	5	Grams.
DADIMAM	6.8	4.8	8.1	6.8	5	Grams.
DRAKSHA	8.1	9.3	3.75	5	3.75	Grams.
HAREETHAKI	2.5	2	3	3	1.5	Grams.
AMALAKI	3	2.5	2.5	2.5	1.5	Grams.
HAMSODAKAM	456	744	456	456	288	Grams.
	771	1155	661	684.5	488.6	3728.1

CONCLUSION

The idea in taking up this work of calculating the Bhouthic strength of the individual dietetic articles is that the Panch Maha Bhootas are as much responsible for the maintenance of the body as much as they are for the formation of the body tissues. The importance of the Panch Bhootas as the constituents of the physical body is emphasised by Charaka when he declares that *एव भानुजस्तु पुरुषः*.

Further elucidating the subject he clearly states.

आश्वातथः समुद्रिताः लेक इति शब्दं कथ्यते
तथा पृथिव्यतेजो वाय्वाग्निं ब्रह्म चार्कं,
इत्येतत्पञ्चभूतैः समुद्रिताः पुरुष इति
शब्दं कथ्यते तस्य पुरुषस्य पृथिवी मूर्ति
आपः क्लृप्तः तेजोऽभिसंतापः, वयुः प्राणः
विष्वक्चिराणि ब्रह्मान्तरात्मा
चान्येषु मांसेषु फलेषु चैव शार्केषु चानुकमिहामेषात्।
आम्बादती भूतगणैश्च सत्त्वा तदाहिरोह मनश्चन्द्रिः ॥

The physical body thus formed of Panch Bhootas is bound to depend for its maintenance for the Mahabhoota balance in the body.

The most common source of supply of these bhootas to the physical body is food which is again formed from the pancha maha bhootas. The dravya Rasa and Guna having common origin from the Mahabhootas their medicinal and nourishing properties do naturally depend on the strength of the Bhootas in them. Susrutha the ancient author of Ayurvedic work has given us a clue in investigating the properties of drugs etc., not mentioned in the Vaidya Nighantu, in explaining that the taste (Rasa) and physical properties (Gunas) of the drugs should be taken into account for judging their action.

It is on the basis of this lead the present method of estimating the bhouthic strength of the individual articles of diet is attempted.

News and Notes

The Result of Twenty-five years of Struggle.

We, the L. I. Ms, have given an opportunity to the Public to know what we have done during the twenty-five years of our existence and to express their appreciation of our work. The occasion was the celebration of the Silver Jubilee of the College of Indian Medicine, Madras, and the unveiling of the Bronze Statue of Vaidya Ratna Captain G. Srinivasamurti, the first Principal of the Institution. There were three days of festivities commencing from 20-1-1950 to 22-1-1950. The Members of the Staff of the College of Indian Medicine, the students, and the alumni who have gathered in large numbers from various parts of the Presidency, took part actively to make the function a success that it was.

The celebrations were organised in such a grand way that the Public and the Press took a kind and lively interest in the College of Indian Medicine in particular. The entertainments organised by the Students for all the three days attracted a large crowd from the Public and drew the attention of local vernacular Papers as well.

The main function—the Silver Jubilee Celebration—was inaugurated by Hon'ble Dr. T. S. S. Rajan, Minister for Public Health, with the Government of Madras. He paid glowing tributes to the work done by the College of Indian Medicine during the past twenty-five years. The following is a short summary of what he has said during the occasion.

He said that he was happy to be present on the occasion of the Silver Jubilee Celebration of an Institution, the progress of which he had watched ever since its inception by the late Raja of Panagal, whose enthusiasm for

Ayurveda knew no bounds. He was helped in his endeavour by Sir Mohamed Usman and Capt. G. Srinivasamurti. Dr. Rajan said that he considered Dr. Srinivasamurti as the 'living spirit' in starting that Institution and was happy to see him present there to see 'how this child of his has come of age when it can stand on its own legs and make its own contribution to the national weal'.

Dr. Rajan continuing said that the celebration was well timed. In the wake of the attainment of freedom and in their effort to survive as a free country, they had to contribute their quota of knowledge and service to the suffering humanity. He mentioned that he was there as proof of the interest and sincerity of the Government in the progress of the Institution, and their desire to help it in the days that lay ahead. Reviewing the work done by the Institution since its inception, he said that the out-patient department had so far treated 16,75,000 patients and the number of in-patients treated was 24,881. The labour cases attended to during the last 11 years was 4,238 and the total number of surgical cases treated since 1946, was 2,058. The average percentage of successful cases treated was 59.66. The Government, he said, were proud to associate themselves with the success achieved by the Institution and they were willing to co-operate in the future development of the Institution, which was bound to grow.

Proceeding, Dr. Rajan said that at the time the Institution was started, indigenous medicine had not made much head-way. In fact, it was being looked down upon—perhaps most unjustly—and criticised that it was not doing much useful service to the country. Without going into the statistics of the population that resorted to one system

of medicine or other, he said, it would suffice to know that our people had used this system of medicine for a long time and the figures he had given would show clearly the record of work done. War and other conditions of trade has not affected the service which the Institution had rendered so long. It was because it did not have to depend for its maintenance on extraneous sources. All medicines it used, were prepared by the Institution itself. "I consider", Dr. Rajan said, "that the record of service done by the Institution is extremely good. The Government will not fail to take cognisance of this".

Dr. Rajan next referred to his recent visit to the Hospital, and paid a tribute to the neat and tidy manner in which it was kept, and to the feeling among the patients of being quite at home in their beds. He also spoke highly of the way in which the nurses in the hospital were discharging their duties. He stressed the need for trained nurses and said that they had become part of the medical profession and had come to stay. No hospital was worth the name without trained nurses, and the nurses had their rightful place in the treatment of patients. He expressed the hope that the nursing staff in the hospital would increase. He said he was also impressed with the Pharmacy and Laboratory.

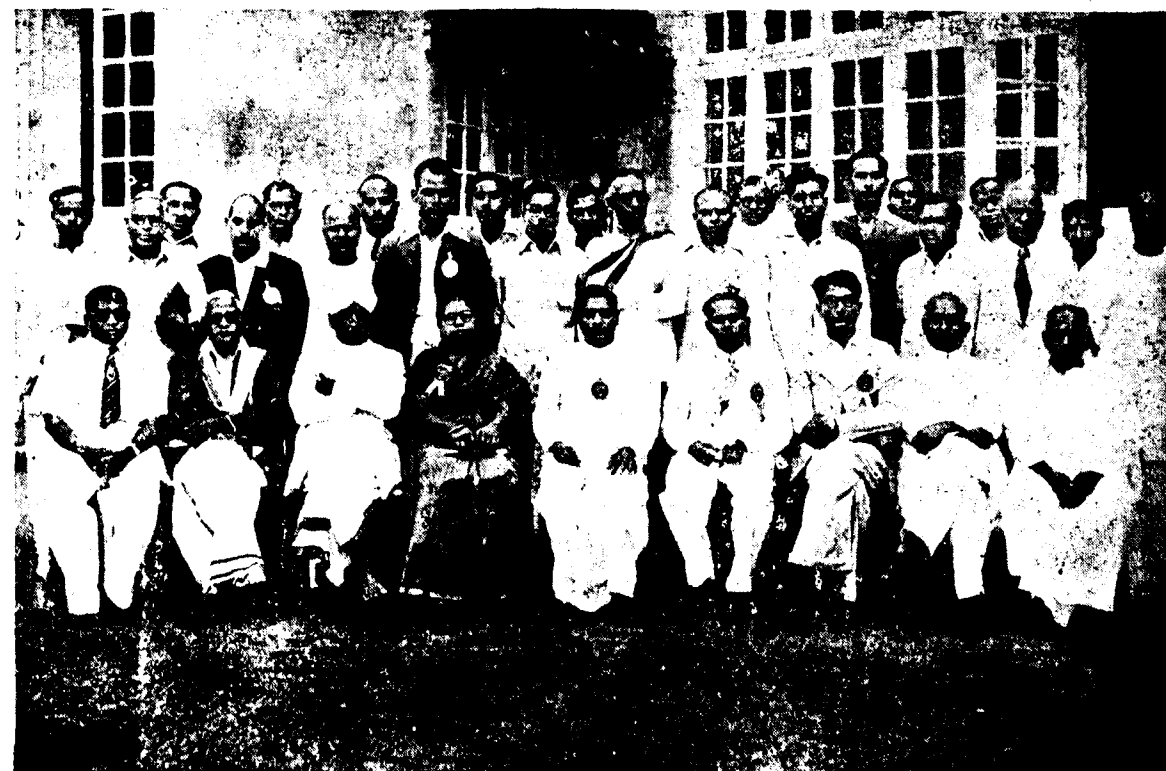
Dr. Parankusam, the Principal of the College, presented a report wherein he traced the growth of the College from 1925 to 1950.

The Silver Jubilee Commemoration Address was delivered by Col. S. L. Bhatia, Surgeon-General with the Government of Madras. He said in the course of his long address the following.

"That during the first half of the 20th Century, much progress had been made in Medicine. But they were still

ignorant regarding many medical problems which faced them, problems regarding the causation and the spread of many diseases as well as their treatment which demanded urgent solution. There was no occasion for any complacency on their part. There should be no slackening of effort. Research, and more research was the need of the day. So far as Indian Systems of Medicine were concerned, they should adopt two measures. One was to institute a Chair of History of Medicine, and the other was to undertake research work on indigenous drugs. It was a happy augury of the times, that in the College of Indian Medicine, they had provision for training both in Modern Medicine and in Ayurveda, Siddha and Unani. He expressed the hope that the workers there would succeed in properly integrating the various systems and thus evolve a unity which was the very essence of medical science. The scope of medicine had steadily widened so that it was not merely concerned with the treatment of the individual when he was sick, but aimed to protect the whole community against disease and keep it healthy. Preventive medicine was a very important sphere of activity which was now, through the agency of the World Health Organisation, going to extend its benevolent influence over the world as whole. If they were to take their full share in international co-operation, so far as prevention of disease was concerned, they should not slacken their efforts in the least in that direction."

Col. Bhatia, in conclusion, said now that India was free, he felt certain that they would keep up the spirit of keeping the way wide open to future discoveries. India had already made contributions of outstanding value to Medicine both in ancient days and in modern times. "Deriving inspiration from our past achievements, I am confident we shall



The 19th L. I. M. Conference, 1950.



Silver Jubilee Celebrations of the Govt. College of Indian Medicine.



Bronze Life Size statue of Vaidyaratna Capt. G. Srinivasamurti.



Unveiling of Statue of Vaidyaratna Capt. G. Srinivasamurti

continue to live up to our fine traditions and make contributions to world knowledge so far as the alleviation of human suffering is concerned."

On the second day 21-5-1950 morning, the Provincial L. I. M. Conference was held in the Jubilee Pandal. Dr. C. Somasundaram L. I. M. presided over the General Session of the 19th L. I. M. Conference, and Dr. P. N. Bhat over the Scientific Session of the Conference. Dr. (Mrs.) K. Gulabi Bai, Chairman, Reception Committee, delivered the welcome address. The session was attended by large numbers of L. I. Ms. A number of resolutions were passed.

Hon'ble Sri. K. Chandramouli, Minister for Local Administration delivered the opening address of the Conference and said that one regrettable feature in the mental make-up of most of the educated people of this country was, that they tended to ape the ways of the westerners. Not only did they pay no heed to the glorious heritage of our past, but some of them went to the extent of condemning everything that was not "modern" according to their standards. The great science of Ayurveda had also come in for its share of condemnation at the hands of these people,

Ayurveda had two excellent points in its favour, Mr. Chandramouli said. Ayurvedic treatment was cheap and was within the reach of the poorest people in remote villages. It was this feature of Ayurveda which made him feel that it had a bright future before it. Ayurveda also placed great emphasis on the fact that prevention was better than cure. Till about twenty years ago, villages in our Province were clean and fairly free from epidemic diseases, because the people followed simple health principles. These were now being forgotten, and it was necessary that people should again be made aware

of the need, for taking steps to prevent ill-health and diseases.

Mr. Chandramouli said that it was his view that every one must study Sanskrit, the mother of most of the Indian languages. It was particularly necessary that those who wanted to take up the study of Ayurveda should master the Sanskrit language. The greatest treasures in Art and Science were to be found enshrined in the language, and the gems of wisdom found in them, should be made available to the common people. The study of Sanskrit would be one of the best ways of enriching one's own mother-tongue.

Practitioners of Indian System of Medicine should learn to stand on their own legs and develop self-confidence, Mr. Chandramouli emphasised. It should be their duty to educate the public about the good points in their systems of medicine. In this work they could usefully learn a lesson from the Allopathic practitioners. Even when a development of minor importance was achieved, they broadcast it from the housetops as a significant step forward. Exponents of indigenous systems of medicine should also come forward and boldly claim credit for what was good in their systems. They might encounter opposition and obstacles, but they should face them confidently. "You can rest assured that I am one with you," Mr. Chandramouli said.

On the evening of 21-1-1950 under the distinguished presidentship of Hon'ble Sri. P. S. Kumaraswamy Raja, Chief Minister of Madras, Sir C. P. Ramaswamy Iyer unveiled the Statue of Vaidyaratna Captain G. Srinivasamurti. The Statue was the gift of the L. I. M. Association to the College, in token of its grateful appreciation of the services rendered by the Principal, Captain

G. Srinivasamurti, to the cause of Indian Medicine in general, and to the College of Indian Medicine in particular. Presiding over the occasion Hon'ble Sri. Kumaraswami Raja said to a large and distinguished audience the following:

"It was given to Capt. G. Srinivasamurti to serve as its first Principal, charged with the onerous function of giving it a form and shape, so to say. It would be quite easy for any one to take charge of the administration of any institution handed over to him as a well-equipped going concern. But to cope with the work of initiating and formulating an institution, especially when it was introduced as an experiment in a field not trodden by the Government before, was really a great responsibility. "It can be said without any fear of contradiction that Capt. Srinivasamurti proved eminently fitted for the job he was called upon to undertake. Having entered it, as the first Principal, he served the Institution well" the Premier said, adding that Capt. Srinivasamurti gave health and strength to the Institution enabling it to grow into the size and status that it possessed to-day.

Proceeding, Sri. Kumaraswami Raja said that Capt. Srinivasamurti's career was a unique record. He was a brilliant student and took his Degree in the Medical Examination with distinction. In addition to his Medical Degree, he also managed to take the Law Degree which was a unique achievement. Capt. Srinivasamurti was active and energetic even after his retirement. It was but appropriate that the School of Indian Medicine, on the occasion of the completion of twenty-five years of its existence, should honour Capt. G. Srinivasamurti, who had earned the name of "Father and Originator of the Institution," by placing a statue of his in the compound. Sri. Kumaraswami Raja

also stated that there could not be a more fitting choice for unveiling the statue than Sir. C. P. Ramaswami Aiyar, because it was when he was a member of the Government of Madras that the Scheme for the establishment of the School of Indian Medicine was initiated and Capt. G. Srinivasamurti was placed at the helm of affairs of the School.

Sir. C. P. Ramaswamy Iyer who unveiled the statue said:—that he had known Dr. Srinivasamurti for 35 years and more, and was glad of the privilege accorded to him to unveil the statue. He counted that privilege only next to the one he had of unveiling the statue of Dr. Annie Besant. It was in Theosophical Society that he first came in touch with Capt. Srinivasamurti. His versatility and scholarship enabled him to be the head of the Adyar Library to which he contributed much, and made it known to the world at large.

Sir. Ramaswamy Iyer, said that what he regarded of special and noteworthy importance in Capt. Srinivasamurti was the liveliness of his intellectual perception and not merely versatility. It was not only his liveliness, but readiness at all times and continuously to learn, assimilate, absorb and expound, which was his contribution to Indian Medicine. The speaker recalled that his colleague and great administrator, the late Raja of Panagal, with his persuasion, steadiness, determination and coercive advocacy, overpowered many difficulties and brought into existence the School of Indian Medicine. He was able to do it inspite of the entrenched weight of authority against him and the Allopaths fulminating against the possibility and potentiality of Ayurvedic Medicine, and discussing the impossibility of co-ordinating out worn tradition of Indian Medicine with the marvels of medicine and surgery in recent years in Europe and America. Not only the

Allopathic experts but also the financial experts stood against the Raja of Panagal. The speaker said that he had the great pride that one of the few votes that were cast on the side of the Raja of Panagal was his.

Proceeding, Sir. Ramaswamy Iyer said that, at that time, there were great men among practitioners of both Ayurveda and Unani systems. A committee was appointed by the Government of Madras under the Presidency of Sir Mahomed Usman to go into the question of development of the indigenous systems of Medicine. Capt. Srinivasamurti was the Secretary of the Committee and in that capacity toured all over India and gathered all possible knowledge. Fortified with that knowledge and experience, he began to reconstruct the science of Indian Medicine and see what was there in it that might be assimilated to the latest results of research. A report was produced which was really the *magnum opus* of the science and art of Indian Medicine. It was now agreed that Indian Medicine was the origin of Greek Medicine which was the gospel of the Allopathic Medicine. The treasures of Indian Medicine were all completely obscured by centuries of neglect and lack of research and with the result that quacks abounded it. It also became a secret affair. Most of the doctrines, when they became secret, very often turned valueless. Any attempt to bottle up knowledge and to keep away from the masses the knowledge of art and science were generally doomed to destruction. The remedies, of which Indian Medicine was capable of, became wholly uninstructed because of the secrecy that had grown around them. Captain Srinivasamurti went into the whole matter and the country owed to him and Col. Chopra for the new reorientation of ideas.

Captain Srinivasamurti had tried to show that there was as much scientific basis for Indian Medicine as for any other system. He wanted not only to explore the knowledge side but also the side of practicability, and therefore advocated the foundation of the School of Indian Medicine.

Sir. Ramaswamy Iyer continuing said that during the last few days many speakers qualified in several Departments of it, had spoken on the past, present and future of indigenous systems of medicine. An attempt was being made to start a research laboratory in Bangalore. All that was needed was careful fostering and encouragement of the root principles, which however much they might ostensibly differ from the principles underlying the Allopathic System, had their undoubted authenticity, value and authority. It was up to them to see that what service had been done for many thousand years was not merely treated as a trifling contribution to human welfare. For over 2,000 years, men had kept themselves well by means of *Kashayams* etc., of Ayurveda and various other systems of Indian Medicine. What was more, research had proved that the Ayurvedic system had recognised its importance as a preventive affair as much as a curative affair. But it did not mean that they should hold their hands and say that they should look to the past, simply read their books and try to prescribe medicine which their forefathers had recorded. A great deal of progress had been made, especially during the wars, in branches like surgery. It was therefore up to them to integrate the Ayurvedic and Unani systems with the modern systems. That it was possible to do so Captain Srinivasamurti had clearly shown. Sir. Ramaswamy Iyer said that he considered it as one of the greatest

contributions to the science and art of Indian Medicine. The greatest thing in Capt. Srinivasamurti's career was that he effected in himself, and found it necessary and incumbent on him to educate others, into a realisation of the innate scientific validity and importance of theoretical basis of what had been till now an empirical science and was derided in many quarters as that. He had made Ayurvedic System both a Science and an Art.

Mr. Jammi V. Badarinarayana, Chairman of the Statue Committee, welcoming the guests said that the Statue and its connected expenses had cost them nearly Rs. 15,000. He said that Dr. Srinivasamurti held the post of the Principal of the Indian School of Medicine and pioneered the institution against "wind and rain", and if it had come up to its present position and pre-eminence it was due to his interest and to his efforts. He then traced the growth and development of the Institution into a College.

Dr. Y. Kondal Rao, Secretary of the Vaidyaratna G. Srinivasamurti Statue fund committee presented the accounts relating to the Statue Fund.

Dr. Narayana Rao presented the book entitled 'Ayurveda—a Survey' dedicated to Capt. G. Srinivasamurti.

Mr. C. Jinaraja Dasa, President, Theosophical Society. Dr. Guruswamy Mudaliar, Honorary Director of Indian Medicine of South India, Mr. R. M. Seshadri and Drs. N. Madhava Menon and T. P. Rajagopalan spoke on the occasion.

On 23—1—1950 Dr. P. N. Bath delivered his presidential address to the Scientific Session of the Conference. On the whole those three days were crowded with one activity or another and all the people who came to attend the functions thoroughly enjoyed and got benefitted.

It was the co-operation of every L.I.M. that had made the function such a grand success. The Statue Committee commenced its work in the month of April and by the end of Decembe finished it ably and successfully.

The Silver Jubilee Committee have brought out on the occasion of the Silver Jubilee an attractive Souvenir containing interesting articles on Indian Medicine by eminent persons, the History of the growth of the College of Indian Medicine and pictures of various persons who had contributed to the progress of the Institution. A full size tricoloured picture of Raja of Panagal is printed in the first page. There are a few copies left. Those who had not had the benefit of getting the copy before, may now get it by sending Rs. 2-6-0 inclusive of postage to Dr. V. Narayanaswami, College of Indian Medicine, Kilpauk, Madras.

The II All-India National Medical Conference

The II All-India National Medical Conference was held at New Delhi on February 15th, 1950, under the presidentship of Dr. Y. Suryanarayana Rao, L.I.M., and Sri. K. M. Munshi inaugurated the sessions. Dr. G. Srinivasamurti presided over the Scientific session of the Conference. The conference was attended by 100 delegates from all over India and most of them are well known exponents of the Ayurvedic and Unani systems of Medicine.

Mr. Munshi said, "the ordinary allopathic practitioners of the street dispensary variety practising in large cities and small towns knew nothing of research, had no specialised knowledge and commanded little skill in surgery." Basing one's estimate on the Bhore committee report and taking into consideration post-partition factors, it would not be far wrong, Mr. Munshi

said, to say that there was not more than one trained allopathic practitioner to every 40,000 of our population.

"The bulk of our population, therefore," Mr. Munshi added, "is served by the Vaidas and Hakims who follow traditional ways but who, like the ordinary allopath, possess no specialised knowledge. They are ignorant of research, but their art is handed down to them from father to son or from teacher to pupil. Their best equipment is experience.

"The claim that even an ordinary allopathic practitioner is a student of science and even the better class of vaidas or hakims are just quacks is an assertion which, though often made, is very difficult to support on a dispassionate survey of the question.

Mr. Munshi referred to the Chopra committee report published last year which laid down a programme by which the standard of the Indian systems of medicine could be raised and their practitioners brought up to the requisite level. "It is unfortunate," he said that the medical profession which follows the western system and the Indian Medical Association, its organ, took unkindly to this report."

"It is an instance, in my opinion, of highly trained specialists failing, as is often the case, to take a broad outlook on a question where their training or class interests preclude dispassionate judgement."

While delivering the presidential address of the scientific sessions, Capt. G. Srinivasamurti referred to a communication said to have been addressed by the Centre in October last year to the Provincial Governments. On the basis of this communication, Srinivasamurti said: "The Government of Madras have issued an order which

makes the position of Indian Medicine worse than even before. The term "Indian Medicine" which has been in use these many years is to be abolished. It may be that even so recently as September 13 last our first and last Governor-General, Mr. C. Rajagopalachari wrote in a message to the Silver Jubilee Committee of the Government College of Indian Medicine, Madras and asking us to claim modern medicine as Indian Medicine. But hereafter, the phrase Indian Medicine' has to go and be replaced by the phrase 'Indigenous Medicine.' So in the future dispensation, the contrast or distinction is to be between 'Modern Medicine' and 'Indigenous Medicine,' with the implication that the latter is antiquated and not up-to-date. The new nomenclature should be withdrawn as it is not only illogical and unsuitable to cover all cases but is also calculated to wound the self-respect and injure the prestige of practitioners of Indian Medicine."

Dr. Srinivasamurti was highly critical of the recommendation in the five point plan that "The Central and Provincial Governments should decide that modern scientific medicine should continue to be the basis of the development of the National Health Services in the country." In other words, this meant, he said, that Indian Medicine was to have no part or lot in the development of our health services. He declared that Ayurveda "with its logical perfection of scientific methodology, the unique comprehensiveness of its basic theories, the wonderful richness of its pharmacopoeal knowledge, the striking achievements of its therapeutic practices whose survival value is so great as to have enabled it to continue under the most depressed conditions it has been subjected to during centuries of allopathic domination and monopoly of State recognition and state patron-

age, to minister to the medical needs of 80 to 90 per cent of our teeming millions," was now sought to be shut out by the Medical Advisers of our Government from playing its proper role in the future development of our national health services. He also drew attention to the succeeding two points of the plan which contemplated the evolution of a single and unified system of medicine from contributions of both Indian Medicine and Western Medicine and asked, "If that is to be so, is it logical to say that western medicine alone, and not Indian Medicine also, should be the basis for the development of the National health services in the country"? He appealed to the Government that they should drop those points of the plan proposing a new nomenclature "deprecatory of Indian Medicine", and proposing that Indian Medicine would have no part or say in the development of our national health services.

Dr. Srinivasamurti then referred to a suggestion said to have been put forward to the Central Government that training in the Indigenous systems should be taken up only by those who have qualified themselves for the practice of modern medicine, and said: "This means that the duration of the course of training in Indian Medicine would be not less than ten years of medical study; for it would take not less than five years to acquire the preliminary qualification, namely, a degree in allopathic medicine, and then a further course of study for five years to acquire qualification in Indian Medicine. How many students will come forward to undergo this long course? Is this the way to promote Indian Medicine and provide for the very large number of qualified practitioners of Indian Medicine required for the needs of the country? The suggestion is preposterous and

devoid of all sense of reality. The Medical Adviser to the Government also wants that all Schools and colleges of Indian Medicine which are now working according to the scheme outlined under stage 1 of the Chopra committee's recommendations for the integrated study and which are being sponsored or aided by many Governments and Universities all over India should all be abolished or turned into centres for giving post graduate training in Indian Medicine to those who are already qualified in modern Medicine. Verily, have we been given stone when we asked for bread" he declared.

The scheme for the integration of Indian and western medicine recommended by the Chopra committee, Mr. Srinivasamurti said, would preserve the unique characteristic of Indian Culture throughout the ages which has enabled it to go on assimilating the valuable and significant features of other cultures while it has remained all the time fundamentally rooted in its own cultural excellences. On the other hand, to implement the scheme of synthesis adumbrated by the Indian Medical Association (and by the Government Medical Adviser) would be to cause a great disservice to the public and to inflict great violence and incalculable harm on our precious cultural heritage in the department of medical science. We cannot believe that our own national and popular government will countenance the implementation of such a disastrous step".

Dr. Srinivasamurti concluded by expressing the hope that the Government of India would see their way to implementing the unanimous recommendations of the Chopra committee and thereby ensure of Indian Medicine "a progressive future of all-round excellence worthy in every way of the glorious days of its palmy and progressive past and even surpassing it as the years roll on."

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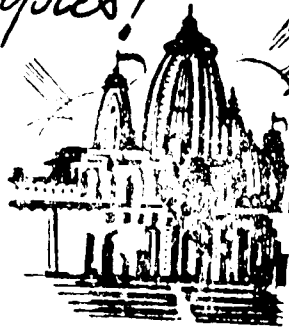
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- (i) to manufacture Indian Medicines of high quality
under expert supervision and direction,
- (ii) to supply the needs of the members in respect of
prepared medicines, raw-materials and appliances
required by them,
- (iii) to purchase such materials and appliances as may be
required by the members and to arrange for stocking
and distribution to members,
- (iv) to provide an Institute or Clinic to meet the profession-
al needs of members and to tender expert advice to
them,
- (v) to open branches or depots for the sale of medicines,
raw-materials and appliances to the members,
- (vi) to do such other acts as may be conducive to the
promotion of Indian Medicine and the general
objects of the Society.

3. Membership is open only to Registered Practitioners of
Indian Medicine and other qualified Practitioners of Indian Medicine.

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