Ayurvedic Inheritance of India Dr. M. S. Valiathan National Research Professor, Manipal University Indian Institute of Technology, Madras

Module - 10 Conclusion

Lecture - 20 An Ayurvedic View of Life

We now come to the end of a long journey, the conclusion of this course of lectures. Within 20 lectures, we have covered the evolution of Ayurveda in India over a period of 25 centuries. In an effort of this kind, it is natural to have omissions, sometimes errors, and for all these, I can only hope that the forbearance of my audience may equal their accomplishments.

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AN AYURVEDIC VIEW OF LIFE

Contents:

- ✓ Indian stereotype
- √ Ayurveda: theme and its integral background
 - Philosophy
 - Destiny
 - Habitat
 - Medical Science
 - Plant Science
 - Practice of Ayurveda : health care and patient care
 - A full life
 - Training of physicians

What I propose to do in this lecture is to recapitulate once again about the Indian stereotype, about the image of India, and Ayurveda - the main theme and it integral background which includes philosophy, destiny, habitat, and of course the main themes of medical science, plant science, practice of Ayurveda, their full life and the training of physicians. All these subjects we have touched upon in the series of lectures, whereas I shall try to recapitulate them and see how they are integrated together; how they hang together; how they form jointly a big picture.

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AN AYURVEDIC VIEW OF LIFE

Indian Stereotype:

- Indians are a fatalistic, if not pessimistic, people who prefer contemplation to action, asceticism to vigorous activity, renunciation to the celebration of life, and seek a life of quietude devoid of worldly ambitions.
- While Indians may not care to characterise themselves, foreign observers have propagated the stereotype and even correlated it with India's climate!



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Now, the Indian stereotype: This is very familiar to all of us. Indians are a fatalistic, if not pessimistic people who prefer contemplation to action, asceticism to vigorous activity, renunciation to the celebration of life, and seek a life of quietude devoid of worldly ambitions. This is often propagated. While Indians may not care to characterize themselves, foreign observers have propagated this stereotype and even correlated this with India's hot climate.

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AN AYURVEDIC VIEW OF LIFE

Indian Stereotype:

 The stereotype is however contradicted by the enormous achievements of India in the secular domain for 5000 years: imperial politics, statecraft, art and crafts, music, literature, sciences, and Ayurveda are outstanding examples of India's secular heritage.

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The stereotype is however contradicted by the enormous achievements of India in the secular domain for 5000 years: imperial politics, statecraft, art and crafts, music, literature, sciences, and Ayurveda are outstanding examples of India's secular image.

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A FAIR ASSESSMENT

 The following quote from Professor Basham is a fair assessment of India.

"The average Indian, though he might pay lip service to the ascetic and respect his ideals, did not find life a vale of tears from which to escape at all costs; rather he was willing to accept the world as he found it, and extract what happiness he could extract from it. Dandin's description of the joys of a simple meal served in a comparatively poor home is probably more typical of ancient Indian's every day life than are the Upanishads". India was a cheerful land, whose people, each finding a niche in a complex and slowly evolving social system, reached a higher level of kindliness and gentleness in their mutual relationships than any other nation of antiquity".

Now, here is a very fair assessment of India by professor A L Basham, a great friend of India, one of the great Indologists. Here, here is what he writes in his famous The Wonder That was India. The average Indian, though he might pay lip service to the ascetic and respect his ideals, did not find life a vale of tears from which to escape at all costs; rather he was willing to accept the world as he found it, and extract what happiness he could extract from it.

Dandin's description of the joys of a simple meal served in a comparatively poor home is probably more typical of ancient Indian's everyday life than the life during the time of Upanishads. India was a cheerful land, whose people, each finding a niche in a complex and slowly evolving social system, reached a higher level of kindliness and gentleness in their mutual relationships than any other nation of antiquity.

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BACKGROUND OF AYURVEDA

- Professor Basham's assessment is an eloquent endorsement of the attitude to life which permeates Ayurveda.
- The mission of ministering to the sick and alleviating suffering is paramount in the practice of Ayurveda. Charaka exalted reasonbased medicine, but did not reject the authority of faith in the words of the preceptor; nor did he justify his insistence on moral conduct in terms of knowledge.



Professor Basham's assessment is an eloquent endorsement of the attitude to life which permeates Ayurveda. The mission of ministering to the sick and alleviating suffering is paramount in the practice of Ayurveda. Charaka exalted reason based medicine, but he did not reject the authority of faith; in other words, shabda - artha vakya; this was given equal importance. He did not only go by knowledge by other means nor did he justify his insistence on moral conduct through knowledge.

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BACKGROUND OF AYURVEDA

- Ayurveda reveres knowledge, but does not divorce ethics from knowledge, let alone subordinate ethics to knowledge.
- From its dim past in the Vedic period, the medical theme which dominates Ayurveda was always vivified by diverse elements in its rich cultural background.



In other words Ayurveda reveres knowledge, but does not divorce ethics from knowledge, let alone subordinate ethics to knowledge. From its dim past in the Vedic period, the medical theme which dominates Ayurveda was always vivified by a number of elements in its very rich and varied background.

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AYURVEDIC CANVAS

- The background of India's past, vast and varied, is essential to complete the big picture of Ayurveda.
- The background included philosophy, ancient traditions, and many other aspects of life which were not part of the practice of medicine.
- The back ground is inseparable from the central theme, which makes Ayurveda "holistic". In this respect, the big picture of Ayurveda resembles a great painting.

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Now, the background of India's past, vast and varied, is essential to complete the big picture of Ayurveda and the background included philosophy, ancient traditions, and many other aspects of life which were not part of the practice of medicine. The background is inseparable from the central theme which makes Ayurveda holistic. So, if you take away this background, Ayurveda ceases to be holistic; it simply becomes another branch of practice of medicine.

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In this respect, the big picture of Ayurveda resembles a great painting. Now, here is an example which some of you may be familiar with. This is the famous painting, The Last Supper by Leonardo Da Vinci. Now, here, if you look at this picture, the central figure of Christ dominates this picture. Here, he is silveted against a window and there are varied elements in this; the room, the table, number of people sitting on either side of Jesus Christ, number of elements are there, but they are all unified into a whole by Leonardo by conscious design.

If you look, the first thing that strikes all these diverse elements, the lines in the background, they all seem to converge towards that central figure of Christ; that is one of the things which strikes you in this great painting. In other words, the background supports the main theme and the main theme is inseparable from the background, and this is exactly what Ayurveda also is the main figure.

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BACKGROUND FULFILLING THE MAIN THEME OF AYURVEDA

- In the painting, Leonardo fused different parts into a unified whole by conscious design. The figure of Christ was emphasized in the center and silhouetted against the window behind him.
- But notice all the lines in the background which faded into the distance seemed to converge on him. One could hardly imagine the Last Supper if the scene were shifted to a shallow room with a different background.

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All these background converging etcetera; it is something similar to Ayurveda because the central theme is that of compassion, caring for the sick, healing them; that is the central theme.

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BACKGROUND FULFILLING THE MAIN THEME OF AYURVEDA

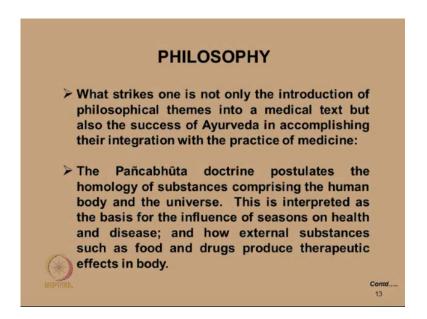
- Divested of its background, Ayurveda too would become poorer and be reduced to another form of medical practice.
- The elements which shimmer in the background and endow undying vitality to the central theme of medicine in Ayurveda are many and varied.

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But there are number of others elements in the background, which shimmer in the background, each one is important and they are all contributing in some way to that central theme. If you take all that away, it will be like that background in the Last Supper painting. You cannot imagine having Christ sitting without any of those elements in the

background. That would look so unnatural; it would not be the Last Supper painting anymore. Similarly, if Ayurveda you take away all these elements in the background, which we listed earlier, then you would find that Ayurveda is no longer what it is today; it will simply become another medical practice.

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Now, philosophy: That is a major part in the background of Ayurveda. We have discussed this earlier, but it is worth reiterating here. Not only the introduction of philosophical themes in Ayurveda, they have done it very skillfully, but at the same time even greater skill is required to integrate those into the practice of medicine. How does a philosophic theme find a place in the practice of medicine? This has been done with considerable skill in Ayurveda like pancabhuta doctrine if you take, it postulates the homology of substances within the body and in the universe. That is the central the heart of the pancabhuta doctrine.

Now, this is, immediately this is interpreted in Ayurveda; events happening in the universe, that will have an impact in the body; in the body tissues; rutacharya, for example, many of those which affect the daily life. The practice of medicine - that is really a part of pancabhuta acting on the human body and human life. Similarly, external substances; when you collect salt or medicinal plants, these are all parts of the universe; they are external things, but they all act on the body. Again, that is because of this unity of existence. The exterior universe and the interior universe; there is a certain identity

and that is how these interactions take place. So, you will find philosophy directly finding a place in the practice of medicine.

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PHILOSOPHY

- Regarding the properties (gunas) of substances, Ayurveda adopted the basic classification of 40 properties from the Vaiseşika system; but confined their use to twenty physical properties which were important in the choice of diet and drugs for patients.
- Similarly several terms which were abstract in the original were assigned concrete meanings. Samyoga which meant joining things which had remained apart, came to mean compounding of substances in Ayurveda.

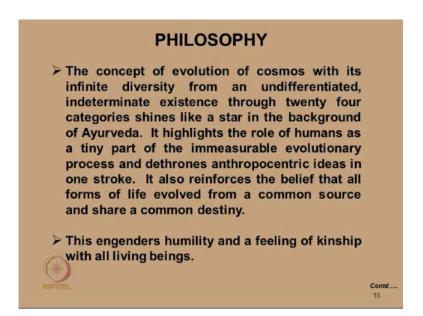
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Then, if you look at Ayurveda adopting the classification of all substances we used, the body consists of substances; our environment consists of substances; various articles we use for medical practice consists of substances; they all have properties. They become effective because of their properties. Now, these properties, medicine does not have to go into properties of substances, but Ayurveda, they have borrowed these properties from the mother of physical sciences in India or Vaisesika system. And the father of this system was Kanada, reputed for his atomic theory, and they had a great obsession with classification substances – padarthas. And padarthas means what? That word itself means anything that a word signifies is padartha.

So, in the universe everything has a word; so that is padartha. So, in classifying these padarthas in that categorization, Vaisesika system says there are 40 properties for substances. Many of them are highly philosophical; not relevant; so, Charaka chose 20 out of them; all physical properties important for the practice of medicine. Suppose you want to measure the quantity of a substance; whether it is fluid, whether it is semi-solid, whether it is a paste, we are all dealing with properties.

Therefore, what is an abstract idea becomes a concrete practical guidance in practice of Ayurveda. So, you find Vaisesika system finding a place in the practice of Ayurveda. Then, we look at Samyoga; again an abstract term in Vaisesika that becomes compounding of substances in Ayurveda; It becomes concrete. What is abstract is made concrete; what is theoretical becomes practical; these conversions you will find often with an effort to make, integrate philosophy with practice of Ayurveda.

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Now, Then, you look at the evolution of what we see one of the great triumphs, achievements of Charaka starting with the indeterminate undefinable types of existence evolves through various tatvas and finally, the 24 principles and we come to the universe and all that the universe consists of; that whole concept of evolution.

What it does is the anthropocentric view of man; man as the center of everything; that is completely dethroned immediately; when you accept this, we become a tiny part of a huge evolutionary process. And secondly, we also realize that we all come from the same place; we are all going towards the same place, and there is a certain attitude of kinship; we become humble; that is again a lesson we learnt. This kinship with everything; this is repeatedly expressed in Ayurveda which again is inescapable, if you take this view of evolution.

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PHILOSOPHY

- The philosophical ideas which were adopted from traditional systems of Indian philosophy such as Nyāya, Vaiśeṣika, and Sāṅkhya underwent significant changes in Ayurveda.
- Ayurveda supported the Buddhist abandonment of mantras and rituals in the treatment of patients: it also adopted concepts such as the "momentariness of knowledge" (kṣaṇika vijñāna). Intellectual freedom was evident in its approach to traditional knowledge.

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And the Nyaya, Vaisesika, Sankhya systems which Ayurveda primarily took philosophy from, there is not much that Ayurveda took from mimamsa or yoga or Vedanta. It is only from these three systems that Ayurveda has taken and even contributed. So, those philosophical ideas, but it did not stop with this. Ayurveda was also willing to accept ideas and philosophical principles from Buddhism. For thousand years, Buddhism was dominant in India and one of them is the momentariness of knowledge. Ksanika vijnana, a very important philosophical idea in Buddhism, which Charaka has adopted and Ksanika vijnana really means the momentariness of knowledge. That is if you and I are sitting here, we consider ourselves as existing here, but we are changing every single second; our structure is changing. Therefore, 10 minutes later, I may look the same, but I am not the same. And a river for example, it is very obvious to us what we see; this is a river; tomorrow I come here and the river is still here, but water is not the same. So similarly, there is a momentariness of knowledge what we consider knowledge.

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PHILOSOPHY > Many centuries later, Ayurveda adopted nāḍīparīkṣa, use of mercury and other metals and drugs such as Rauwolfia from external sources. It had a catholic outlook and followed Charaka's exhortation "The entire world is a teacher for the wise".

It has very many implications, but Charaka adopts that; that is a Buddhist concept. So, there are several others. When it comes to practice of Ayurveda, you will find, we have said this also before, ideas coming from other systems. There is a Chinese system or Arab system or Rauwolfia, for example, which was not, it is not in the bhuruth rahi. So, very many places you will find willingness on the part of Ayurveda to adopt ideas, not only from our philosophic systems, even from exterior sources. So, there is certain catholicity in the attitude of Ayurveda, and this is what Charaka had actually exorted and Vagbhata also.

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LIFE SPAN; DESTINY

- Physicians were confronted by the question of prognosis: specifically, effect of life span with which the patient had been endowed and its influence on the outcome of treatment.
- Is the outcome of treatment predetermined? Can medical intervention modify or neutralise the effect of predetermination? These two extreme views had proponents; but Ayurveda took a middle position which assigned an important role for human effort.
- If destiny reigned supreme, there would be little role for human effort including Ayurveda.

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Then we come to destiny, a very important concept; very often we will hear that Indians are a very fatalistic people; fate has decided everything; so, why make an effort? What is bound to happen is going to happen. This attitude is always associated with Indians, but this has been discussed with Ayurveda because medicine is greatly concerned with death, the fear of death, the anxiety about death from patients and relatives. So, physicians cannot get away from this problem of destiny, lifespan and this has been extensively considered in Ayurveda.

For example, if lifespan is pre-determined, then what is the point of any treatment? What is the point of Ayurvedic treatment? Charaka asked this specific question. What is the use of making offering to Gods? If everything is predetermined, why are you doing it? That kind of question comes. Now, there, the message which Ayurveda through Charaka gives; Sushruta does not discuss this very much.

And in this, what comes out is this - all that you have done in the past; when the life span is pre determined, what it really means? It has been determined by your karma; various things that you have done; you have accumulated so much of burden and this is going to happen. So, you cannot change it. But Ayurveda took the view, Charaka especially; all that you have done, there is a force in that; that force is going to overcome you, but what you are doing now also has force. So, if the force of what you are doing today, if it is strong enough, it can overcome the past force, then nothing is going to happen to you;

you can overcome that; you can live well, healthy, happy. But suppose what you are doing is too inadequate, then surely your, the past actions will catch up with you.

So, here is a message of hope and courage that if you live a life of subruti, morally what he calls a code of conduct, which he has repeatedly stressed, a noble conduct of life – subruti, that is really what is required; not overuse of senses, non use of senses, misuse of senses; all these are against the code of conduct. So, if you can have that right of code of conduct, then it is possible to overcome the forces of your past actions. Now, that gives you the immediate impression that fate can can be overcome under certain circumstances and Vagbhata clearly says that human effort, be aware that human effort can overcome. So, that is a message of hope and courage.

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DESTINY

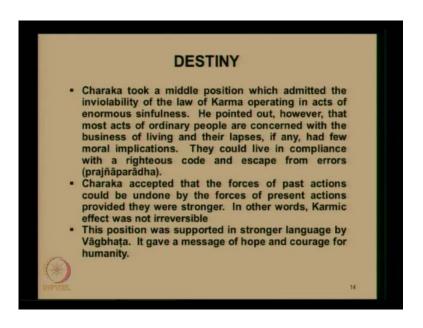
Charaka took a middle position which admitted the inviolability of the law of Karma operating in acts of enormous sinfulness. He pointed out, however, that most acts of ordinary people are concerned with the business of living and their lapses, if any, had few moral implications. They could live in compliance with a righteous code and escape from errors (prajñāparādha).

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And Charaka also says, the ordinary people, when you talk about the past actions overcoming everything and subduing human life, what it means is these are sins of enormous magnitude. Those are the actions; there is no way you can overcome that, but most ordinary people, our mistakes, our errors, our failings, they are not of that kind; there is not much of moral content in it. If a man is smoking, it is not an irremediable sin. He is not committing an act of great sinfulness or taking to liquor whatever else; that is not accordance, in accordance with the noble conduct, but these are not acts of enormous sinfulness; those are something which are well within his control; he can control.

Therefore, those if you can control, again avoiding the extremes that middle path, then you can avoid prajnaparadha. Prajnaparadha is a cause of many of these like liquor or a kind of wrong lifestyle; overeating, gluttony, gaining weight, no physical activity, lots of things like this. Or even have needless tension; what you should do, you should not do or what you should do, you keep on delaying; all that sort of thing everyday which happens, it adds to the tensions of life; becoming over ambitious. These are things which are well within our control, there is no great moral dimension to them. And if one can take care of these, then you can avoid prajnaparadha and many of these what are called now lifestyle diseases.

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So, this is a very a hopeful message on which one can act.

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DESTINY

- Charaka accepted that the forces of past actions could be undone by the forces of present actions provided they were stronger.
 In other words, Karmic effect was not irreversible
- This position was supported in stronger language by Vāgbhaţa. It gave a message of hope and courage for humanity.

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And Charaka also says - In our Indian tradition, often we have considered our suffering is because of false knowledge; this is agnyana. Often you will find this description and agnyana is a metaphysical term; that is you are mistaking real for unreal or unreal for real; that is is a kind of agnyana. What is unreal, you think it is real; what is impermanent, you think it is permanent. Now, these are the errors that we make and this is a philosophical concept. What is reality? Now, whereas, Charaka says the cause of suffering is not this; cause of suffering is our prajnaparadha; that is what is causing suffering to the great majority of people.

So, if you try to avoid the agnyana, eliminate it in the philosophical sense, you are becoming a sanyasi in the pursuit of atman; that is a very different type of life. It is just a great place, but only for a very small number of people who have that kind of attitude, but for great majority of people it does not even make any sense. If you talk to people walking on the street, they do not understand what is reality, unreality. Asatoma sadgamaya - how many people will really understand what it means? Most of them, their suffering is because of this, at a different level.

So, Charaka's medicine, they are essentially addressing to that. Common people who come as our patients, how do you look after them? How do you remove their suffering? And this message of reality, unreality will not make any sense to them. This is the approach that you will require.

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HABITAT

- Ayurveda had a reverential attitude to Nature earth, fauna, and flora, and all other derivatives of five bhūtas which constitute the physical universe.
- √ The locale for the discussions which dominate Charaka Samhita, and Charaka's description of a house for treatment show the sensitivity of Ayurvedic masters to the bounty of nature.
- ✓ By repeated caution on the overuse, underuse, and misuse of sense objects – our physical resources – Ayurveda sent out a strong message for the inevitability of sustainable consumption.

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And then we come to habitat. And habitat is there is a long tradition in India. From Vedic times, we have seen their love of nature considering earth as the mother. Even Atharva veda repeatedly says that love of life, environment, trees, birds, Charaka's description of a home for treatment. If you remember he talks about it; it is in a Himalayan type of valley, not too much of strong wind or dust; there should be plenty of trees; there should be cattle roaming around; there should be birds and bird song; clear water, water bodies, lakes all that he gives a description. So, that is a very beautiful nice place; that is where the home of treatment is. And often the discussions which were held under Athreya's chairmanship. Many of the discussions in the Charaka Samhita, you will find they are all held in the Himalayan valleys; that is where these meetings are held. In fact, many of the ashramas, the gurukulas, they existed in such environment. So, that was the whole love of nature was encouraged. So, the people had a respect for their habitat; destruction of habitat was not on the cards in those days. That is a vague impression you get, when you read it.

And the Charaka's description, others also worked. Vagbhata also reflects this; no overuse of your senses. Now, this is repeatedly stressed and overuse of senses means what? Senses, means our five senses and if you overuse your senses for consumption, whether it is any sense, if you overuse it, you are going to overuse the resources and resources, physical resources. Now, these are what all that we see, all accessible to our

eye, accessible to our ear; that is what the universe is; all the physical resources around us, if we overuse them, our population is increasing.

And like Americans are overusing their resources. Now, if rest of the world wants to attain the American standard of living; that is a good example; there will be no possibility for human existence because we will run out those resources. So, what is alled sustainable living? Now, that term has become very important, United Nations also encourages that sustainable consumption; not only sustainable development that is necessary, but sustainable consumption. When you keep on consuming, you should realize, we - the human beings of this generation, we are not the only owners of this earth; we have got many others; the birds, the deers roaming around here; they are all, the animals, the birds, they all have to live.

Therefore, this is not exclusively for us and similarly, this is not exclusively for our generation. There are many generations to come hereafter. So, when you talk about sustainable consumption, what it really means is there is a voluntary limit on what you are using. Now, this comes out in this consideration for a habitat. If you do not have that, every generation does not have this attitude of sustainable consumption, then life becomes unsustainable. That is what we are heading for; that is a warning which is often given in Ayurveda.

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DESTRUCTION OF HABITAT

- ✓ Love and respect for nature translated into environmental ethics and required humanity to comply with a code for sustainable living. This acknowledged that the earth is not designed for the exclusive use of humans or for the present generation.
- ✓ Grave warnings were issued against the aggressive conduct of rulers who fought wars for the sake of plunder, impoverished the land and people, destroyed governance and brought on epidemics and devastation.
- The sovereign prophylaxis for the destruction of habitat was righteous conduct of the rulers and the ruled. There are no short cuts.

Then we come to destruction of habitat. It is no wonder a great deal of attention was given to this in the Charaka Samhita. And Charaka has given grave warnings against the aggressive conduct of rulers who fought wars for the sake of plunder; it happens even today; impoverish the land and people; destroyed governments and brought on epidemics and devastation. You only have to look at the Africa in the last 30 years. All these you will see there; 200,000 people killed and the world looks on because this is exactly what happens. Certain powers come; they want to plunder; there is so much wealth there. So, these exploiters come and they destroy the land and people pay for it; hundreds of thousands of people being killed and the sovereign prophylaxis for all this is righteous conduct, not only of the rulers, but also of the ruled because that is important.

It is not that only the kings or the rulers are responsible because the ruled are also taking a part in this. There is a, you must all have heard about Vibhishana, one of our great characters in Ramayana. It is curious that in Ramayana, only two characters Hanuman and Vibhishana are considered chiranjivis. In the Indian tradition, we have a few people, half a dozen who are considered chiranjivis; that means they are alive even today, like Vyasa or Vibhishana not Rama or Lakshmana or anybody, but Vibhishana. And why Vibhishana? He was the brother or he was an asura, he was the brother of Ravana. Why is he considered to be a chiranjivi?

Now, here, there is a something interesting; that is Vibhishana was Ravana's younger brother. He was enjoying all the comforts and authority as the crown prince living in the same or next palace, respected; he had everything he wanted; everything life was full but he was kind of uneasy with all the kind of things going on there. Ravana's rule taking away peoples, the aeroplane belonging to Kubera, you just steal from him; take it away from him; take away other peoples' wealth; plunder it; killing people. He never thought anything about it; going and committing war against somebody who had done him no harm; take away his wealth; even taking away Rama's wife. So, he was progressively becoming unhappy, worried, but every time he went to express his reservations of protest he was terrified of Ravana. Ravana glared at him and he would just keep quiet. He was afraid, not only afraid he was also afraid of losing everything. If he was turned out by Ravana without killing, he would be on the street; he had nothing of his own; so, he would keep quiet.

So, this conflict, on the one hand you have everything, but you have to live with all this unrighteousness or you seek a right righteous life and you lose everything. So, this happens in every rule. Even in India today if there is in the Government, you are part of the government; you are a senior officer and all kinds of wrong things are being done; you know it is wrong, but you dare not protest. If you protest, you will lose your job; so, you keep quiet. So, not only the rulers, ruled also; they have also to live a righteous life. Otherwise, it is not going to work because unrighteous king and all the people become unrighteous like him, then there is no hope. Therefore, it is necessary that not only the ruled, but also rulers have to share in that righteous living.

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MEDICAL SCIENCE

- Medicine based on accurate observation and experimental confirmation of hypothesis date back to Renaissance. Prior to that defining event, medicine in Europe and India was based on observation, experience, intuition and faith.
- * Ayurveda was encyclopedic in dealing with medicine and had been systematized by Charaka. But in several Ayurvedic concepts and procedures, one could detect seeds of speculation and insight, which would qualify as induction and the forerunner of science. The mechanism of action of pañcakarma and the role of channels (srotas) in disease process are prime examples.

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And medical science: It is based on accurate observation and experimental confirmation of a hypothesis. This whole tradition of modern science which we have discussed earlier, that dates back only to Renaissance. That is the time we saw that earlier like Vesalius describing accurate anatomy after painstaking dissection for many many years and William Harvey's experimental demonstration of circulation of blood. Now, these are two classical examples of foundations of modern medical science. And from then on, medicine has been based on this accurate observation experiment. You may have a something in your mind, a hypothesis, but if you want to test that hypothesis, it has to be tested not by experience alone; it has to be tested by experiments.

Whereas, prior to this, whether it was medicine in Europe or medicine in India, observations were there; not very accurate; like our own study of anatomy; it was not very accurate; experience. So, the testing was only at the level of experience. You have lot of observation with all its imperfections and then from experience you learn that this particular treatment will work, and there it stopped. It did not go beyond that. This was true in Europe. And intuition and faith, that also was there; that is, sometimes with a lot of experience, you may feel that this is likely to happen; that kind of intuition, often they are correct; that was also important in ancient Europe as well as ancient India and faith, but there was no experiment.

But if you want to become this to be scientific, then you have got to have experiment. So, your hypothesis or your scheme, various images in your mind, you have put it together; you have been turning it around to seek new arrangements, and you find a total new arrangement how panchakarma is going to work. Or the disease process - how this causation gets into the body; certain changes take place and they transit through these enormous number of channels and produce disease over a period of weeks or months; that kind of. This is all in your imagination; you do not see any of these, but these images in your mind; you constantly turn around and you come with a new type of new type of a scheme; that is what they had like panchakarma is being done.

That is exactly what you are doing. You assume that these things are going on in the channels and they are blocking the channels here and there; these concretized doshas; you want to loosen them; so, you give a lubricant and you want to bring them back into the gut; so you give fomentation and then you give a purgative or enema or something and get rid of it. Now, this is all in your imagination and the test is only the experience. Patient feels better; there it stopped, but that is not science. Science - you have to demonstrate it in an, in that experiment which can be replicated by anybody. If it is done in Chennai, it can be done in Trivandrum; it can be done in Beijing, anywhere.

So, that becomes science. So, that verification of your imaginative scheme or your hypothesis that has to be tested not by experience alone, but it has to be tested by experiment. Now, that is something where we stopped and where the western science went further. And Ayurveda is encyclopedic in treating; in considering a medicine. A large number of diseases are described, but in several Ayurvedic concepts and procedures; this is what I am mentioning; whether it is the panchakarma, whether it is the

concept of srotas; you will find there is an attempt. It is not simply emperacism. Emperacism is there is no hypothesis; there is no images; there is no because this particular medicinal herb worked in the experience of my teacher; so I am doing that; that is emperacism.

Something which worked and I am giving that and that is also one type of treatment; like folk medicine for example, folk medicine many medicinal plants are used. In fact, many of the Ayurvedic herbal medicines came from folk medicine only. Some years ago in tropical botanical garden, Trivandrum, some of you may know this; Doctor Pushpangadhan was the director; a very well-known ethno botanist. And one day he has gone for a trekking along with his colleagues in the forest near Trivandrum and there his guides were tribal people called kani tribes; these are tribal people living there and they were showing them their way.

And after some 3, 4 hours of trekking, the scientists got very tired; they wanted to rest, but these kanis were going; nothing could stop them. And then, periodically Pushpangadhan noticed; they were chewing something; a little fruit. So, he asked them what are you chewing and they had a particular plant there; a very small fruit they were chewing and they said if you chew this you will not feel tired and Pushpangadhan got that. On that, they did the research and they found something and finally, the Kottakkal, I mean the Ayurveda Vaidyahshala in Coimbatore, they took the patent; they produced it; something like the Chinese Ginseng; we do not really know how it works, but it does have certain energizing effect.

Now, here the tribal person, what they were doing was emperacism. From experience they found that this works in a particular way and they keep on using it. Now, that is not what Ayurveda does. In Ayurveda if you look at these two specific examples, one is the srotas ,the whole concept on which we spent a lot of time or panchakarma. In many others for that matter, you will always find there is a certain amount of imagination and imagination is simply images you are turning around into your mind. So, they are thinking and these images, finally, they produce a certain scheme; how this might work and experience they tested. Now, that is really, this images being turned around in your mind to seek new arrangements and through some insight, you are able to do it; a scheme comes. Now, that is inductive reasoning; that is really the beginning of science.

Without any images being formed in your mind and playing with those images, you cannot really create science. You can only repeat what somebody else has done in America. You can do it here and write a paper. That is not really inductive science at all; it is a copy. So, if you do this, in Ayurveda, there are plenty of such examples of the beginnings of inductive science; that is something which we must take note of.

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PLANT SCIENCE

- According to Dr Ved, Charaka Samhita refers to 1990 plant names including synonyms, of which less than 700 have been identified beyond doubt.
- The identification, determination of clinical activity in different parts, development of complex processes for enhancing therapeutic activity and neutralising toxic effects, and assessing the influence of geography, season and time on therapeutic activity of formulations was a tremendous effort which laid the basis for plant science in India. This was the source of information for Garcia da Orta and Van Rheede who led the wave of European exploration of the traditional medicine of India.

And plant science doctor Ved of FRLHT, Bangalore, he has calculated there are 1990 medicinal plants mentioned in Charaka Samhita on which only about 700 there have been kind of unanimity; otherwise there is a lot of disagreement about the identity of these plants. Now, if you look at this, what is of interest to us is, there are so many plants which exist all around us. We are not, just imagine if you want to take some of these plants and to make new formulations, how would you do that?

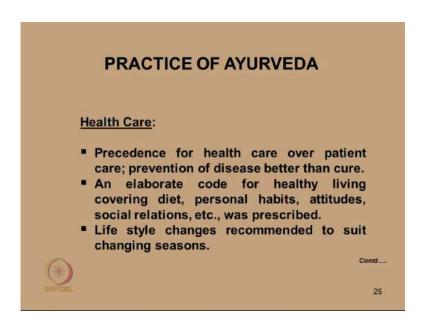
Now, that gives you an idea of the immensity of this; that is to identify plants of these huge thousands and thousands; even now, there are we have probably used to only 10 percent of the plants or perhaps even less. Maybe if you include the folk medicine, you may have used 10 percent; we can identify them, but all the rest they are untouched and there may be many many wonder drugs in those.

Suppose, you want to take that 1000 plants from that, how would you identify those with potential use in medical practice? How would you identify which part of that plant could be useful? How would you process them and how would you identify there is toxic,

certain parts are toxic? and if you know that certain parts are toxic, how do you neutralize them? How do you eliminate them? How do you develop a procedure for making it into a formulation? All these, if you want to do that, how how long it would take for that process? A committee, a large number of people has to work to do this, from prospective to this, and when you have done this for thousands of plants, the kind of effort which has taken place over hundreds of years. So, that is something which it is one of the most extraordinary achievements of Ayurveda or medicinal plant wealth.

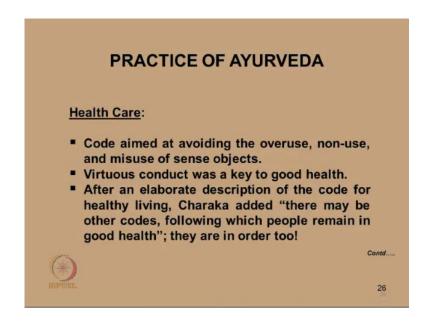
In fact, it was from this collection of information I have pointed out like Gharcia da Orta, the first European who wrote the colloquies on Indian medicinal plants for the first time in the 16th century. And there, the Pao, the Indian who became the chief physician in Goa, he prepared a list of the roots of Indian medicinal plants and many of those are taken; not all, many of them are taken from the Ayurvedic classics. So, this information is an international heritage.

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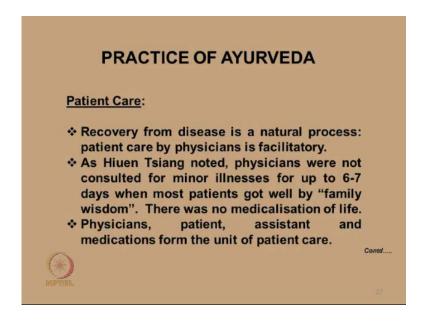
Health care and precedence: Importance given to swasthavritta over Adhuravritta that principle is well accepted in Ayurveda; an elaborate code for living, healthy living covering diet, personal habits, attitudes, social relations, these were all prescribed in the greatest detail and life style changes recommended to suit the changing seasons.

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And again the code is bottom line is no overuse, non use or misuse of your senses. Virtuous conduct was a key to good health. After elaborate description of the code of healthy that is again an attitude of librarity in Ayruveda. Charaka says, all after a very detailed description, he says - there may be other people who may be following a different code of life and they may be healthy and happy; in that case, that is acceptable. So, he never tries to impose. The only time as I mentioned in the whole of Ayurveda where you should find the commands that is only to the student at initiation. Otherwise, everywhere, this may be done; that permissive liberal attitude.

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Patient care: Recovery from diseases is a natural process; patient care by physicians is facilitatory. And Hiuen Tsiang, the Chinese pilgrim, he noted specifically that the first 6 or 7 days for ordinary illnesses, most families would not consult a physician. It was all domiciliary treatment, the grandmother's wisdom, all these had a place. They never medicalised life. Today, one of the great problems we have is we encourage this belief, even the smallest illness you must consult the doctor. If you do not consult the doctor, disease will become very severe; you can have all kinds of problems; you must have checkup; even if you are feeling good, you must have your checkup every 3 months or every 1 month; by the practice that you are, if you do this, you are gradually medicalizing your life.

Things which we would have done on our own without any help from anybody, you will not do unless the doctor certifies. There is a small drizzle; can I go out or is it harmful to my health? I must check with my doctor. So, we come to a stage like this. I had sneezing 3,4 times I sneezed this morning; normally I do not do that; I must consult my ENT doctor. So, this kind of attitude which is often encouraged by medical profession by the pharmaceutical industry; now, Ayurveda is also promoting this. So, you must have panchakarma; you must get it done every month.

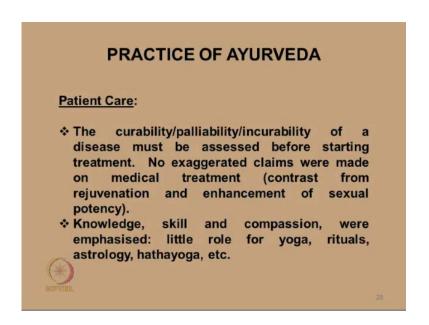
Therefore, this constant attempt to introduce medical attention, consultation, medical practice, checkup, all these have a place, but by making it part of our life, you are medicalizing life and that is a great danger because it will become unsustainable. This is what happened, what is happening in the United States. For example, 17 or 18 percent of the GDP is going into healthcare and nobody is happy. People are scared to become sick because insurance cannot afford. The Government cannot afford to support this health care because everybody is overconsumption, checkups; it goes on and on, endless; many of those; there is a place for checkup that is different.

Suppose, a patient is a woman had a breast cancer. She died of breast cancer; the daughter had breast cancer and her daughter, the granddaughter, if you tell her that you must have your checkup regularly by a surgeon for a lump in the breast; it is necessary to have. Now, there is a place for that because she is very much; now, of course, there is a genomic assessment; I am not getting into that, but even clinical history. Or hypertension, a patient is well known; there are families, grandfather died of cerebral

hemorrhage; the son, his son died of a stroke and the third person, grandson has hypertension.

Now, you must encourage; he must have his checkups; there is no excuse; you must have your checkup even from the age of 30 or even earlier, and if the diastolic pressure is 90 only, you may even want to treat because it is very high risk. But for a perfectly normal person, there is no such family history; you should not enforce the same rule on him. If you do that, then you are going to treat millions of people who do not need all this. So, somebody has to pay for this. The healthcare system becomes too expensive and society will not be able to support that. And the physician alone is a member of a team; that is that includes the assistant, medications, patient, they all have a role and the family wisdom has a role in the management of common illnesses.

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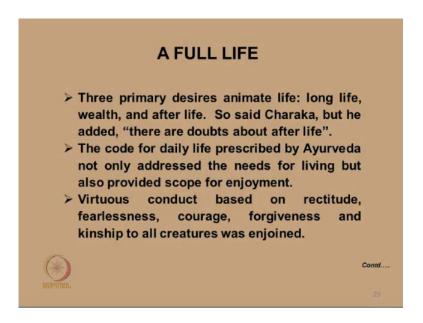
And curability, palliability, incurability of a disease must be assessed before treatment. These are all fundamental principles in Ayurveda. And no exaggerated claims because if the initial assessment shows that this disease is incurable, you should not waste too much; there is a mention about that; you should not keep on treating needlessly. In a diplomatic way, the patient's relations must be told about this incurability. Certainly, if you are going to do any surgery, it is very important not to do a surgical procedure without taking them into full confidence about the dangers of the operation and also

possibly the incurability. So, there is certain frankness in this and knowledge, skill, compassion - these were emphasized and little role for yoga, astrology or hatayoga.

This is something which in many of the books nowadays published on Ayurveda, you will find yoga, naturopathy, all these things are hatha yogic practices, asanas. They are all different subjects, but when you are talking about Ayruveda, the traditional bruhath rahhi, there is very little role for any of this. I do not find any role, like for meditation; I am not against meditation, but if you are talking about Ayurveda, then there is no role for meditation; it is not mentioned anywhere.

Rituals - they had a very dominant role in the Vedic medicine, but in Ayurveda, rituals have very little role. Astrology - except the astral combinations that is the only astrology I am finding; that when a difficult or dangerous procedure is going to be done, then you should have an auspicious moment chosen; that is the only reference to astrology that I am finding in Atharvaveda; otherwise, there is no emphasis whatsoever on astrology and hathayoga. These are things which need to be reiterated because I have seen several books written by Ayurvedic people where all these are mixed; as if they are that is part of Ayurveda which it is not. You may practice it that way; this is personal practice, his choice, but it should not be mixed up with Ayurveda.

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And a full life: This is important, the Charaka says. The very first beginning itself, he says what are the three purposes of life. The main purpose of life are the desires, the

urges in life. There he says pranaishana - living a long life. In fact the beginning, the first line is we shall discuss the science of long life. That is how it begins. So, a long life; it is a very positive attitude. And second he says a long life vitaishana. You have to have some resources; you have to have money; otherwise, how can you live in poverty, a long life which is very miserable. And then only comes the afterlife, the third and he immediately adds there is some doubt about that.

Therefore, that very down to earth full life, practical, long life everybody wants to live; this is a reiteration of what happened in Vedic times. And then the code for daily life prescribed by Ayruveda not only addressed the needs of living, but also provided scope for enjoyment. That is an important point that virtuous conduct based on rectitude, fearlessness, courage, forgiveness, all these are repeatedly mentioned throughout. But that second point that is not only the satisfying the biological urges; there is real scope for enjoyment in life; there is nothing wrong in that.

Now, alongside, look at this, alongside the core rejuvenate therapy and enhancement of sexual potency; these are all, there is whole separate section in Ayurveda dealing with that. And classification of foods, their variety, dietary preparations, directions on harvesting plants and cooking food items, details on the after food of the post prandial drinks, after different types of foods. Now, all this shows eating the meals, it was not only to satisfy the biological urge of hunger; it was also to enjoy the food. So, the biological urge satisfaction is the primary thing, but all this descriptions tell you that it was not only just eating to live; it was to enjoy; the food you have to enjoy; that is a very important point.

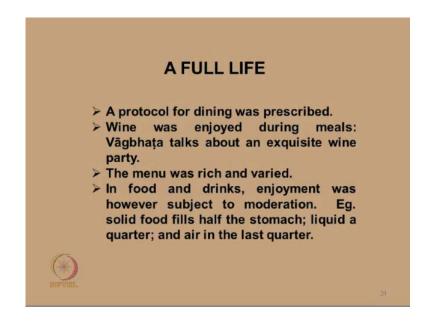
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A FULL LIFE

- Along side the code, rejuvenant therapy and enhancement of sexual potency and fertility were also recommended.
- The classification of foods, their variety, dietary preparations, directions on harvesting plants and cooking food items, details on after drinks following different foods, etc., show that meals not only met a biological need but were also enjoyed.
- Eating food was not only enjoyed but was also regarded with a touch of reverence, reminiscent of oblations being poured into the sacrificial fire.
- Sexuality was emphasized not only for procreation but also for enjoyment.

And similarly, sexuality: It was emphasized not only for procreation. If you read Vagbhata for example, there is a whole chapter on that. Procreation - having son, that was the highest objective, but that was not the only thing. There was no sin in enjoying it. Whether it is enjoying food, whether it is enjoying sexuality, Ayurveda, there was no nothing sinful in this, which is an important point. As far as food is concerned, it was not only the satisfying the biological urge to survive or to enjoy, but there was also a certain tinge of sacrifice in that. In fact, Charaka says - just as in a pouring an oblation into the sacrificial fire; the food that you are eating, you are pouring it into the jathrathini; that is a sacrificial act. So, there is a certain amount of reverence also in the matter of food.

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Now, talking about enjoyment, so, look at this a protocol for dining. It has nothing to do with the biological urge to eat; it is much more than that. Wine was enjoyed. Vagbhata talks about a wine party. The menu was rich and varied; how, in what sequence it should be served; what kind of container should be used; all these are described. But then all these had certain limits. For example, food with all this talk it says subject to moderation, solids should be filling only half the stomach; liquids should fill one quarter; air should be in the last quarter.

Therefore, there was a limit to all this, whether it is wine party or whether it was food, whether it was sexuality, everywhere you will find a certain limit is prescribed; that moderation which was again Vagbhata has a specific sentence on this - the middle path, no excess.

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TRAINING OF PHYSICIANS

- ✓ A sacred obligation of physicians.
- ✓ Selection of students and qualifications for preceptors set very high standards.
- ✓ Oath before initiation covered all aspects of the students' personal, professional, social and spiritual life. This was perhaps the only occasion when instructions were given in imperative mood (lot): on all other occasions, potential mood (ling) was employed.

Contd....

Then, we come to training of physicians. It was considered a sacred obligation to train the next generation. So, whatever skills you have acquired, whatever knowledge you have acquired, you have a responsibility to transmit it to the next generation. That was considered a duty. And the selection of students and qualifications of very high standards were insisted and the oath it covered, quoted the entire oath that was administered to the students; it covered everything about ethics of medical profession.

There is nothing that can be added and here is the only place where the imperative mood was used; you shall do this. Sathyam vadha, dharmam chara; that kind of orders, it was only here that you would find this. Everywhere else it is the ling, you may do it; you may do it. So, there is a big difference in the attitude. Here, there is no compromise, whereas in all the others, there is room for compromise because there may be other ways of doing it; whereas, here there is no other way. You have to do it. And then, training entailed payment of fees; it is a very advanced concept. In those days nothing was free. If a university Jivaka goes there and the physician asks do you have money to pay?

Today, we expect everything to be free, but in those days there was payment and these universities were not supported by the Government, by the king and various people donated money, traders, common people and so on. So, the students had to pay, but if the student wanted to work, he did not have cash with him, but he was willing to offer service; that was accepted; part time work.

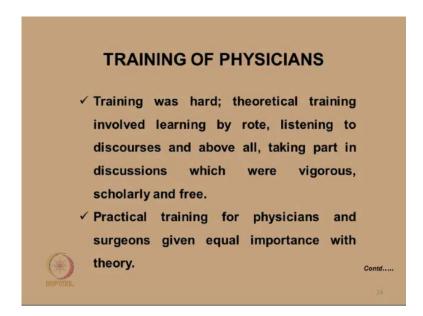
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TRAINING OF PHYSICIANS Training entailed payment of fees, but personal or domestic service of the preceptor was accepted in lieu. Kings/rulers had little role in the training of physicians except to give a license to practice on the recommendation of the preceptor. Contd.....

This was accepted in those days both in gurukula as well as in the university system. And it is important that the kings and rulers in those days, they did not setup these great universities. They did not set up the gurukulas. It was all done by private individuals. Even great universities like Takshashila, they were setup kings by making contribution, but they were setup by a group of people; traders, mainly traders who were prosperous, and they would set it up.

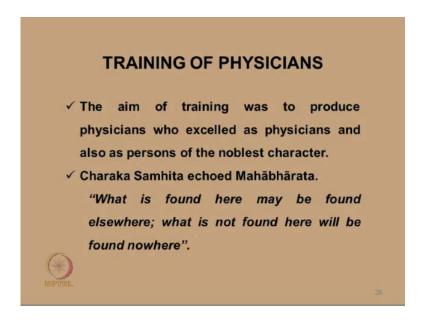
So, that is an important thing; there the tradition. We talk about public private partnership now, but here is a long ago we had these examples, entire private enterprise like Nalanda University. So, it might so happen, a king who is very impressed with this which happened in Nalanda; he says I will give these 20 villages; he makes a donation. So, the income from those villages in perpetuity, it will go to this sustaining this university. So, that is again something we can be proud of.

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And the training was very hard, theoretical training, learning by rote, getting up at three hours before sunrise and starting with this hard work, listening to discourses and above all, taking part in discussions sambhashas in practical training, equal importance to theoretical training.

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And the aim of training was to produce physicians, who excelled as physicians and also persons of the highest character. And Charaka Samhita echoed the Mahabharata [FL] so much the whole aspect of life starting not only medical, a whole lot else has come into

Charaka Samhita or Ayurveda. That is how it is this particular couplet is highly appropriate because what you find here, you find in philosophy; you find in ethics; you find in environment; you find in education; you find in manufacture of medicines; everywhere you will find Ayurveda has a message. So, that is how it has become so holistic; so admirable.

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PERENNIAL MEDICINE

- ✓ Charaka declared that Ayurveda is perennial in the sense that the flow of life is always subject to pleasure and pain, laws relating to substances, and knowledge relating to body and its knower.
- ✓ Furthermore, the primary mission of Ayurveda is healing, which is indispensable for the evolution of species. It operates at all levels of biological organisation genome, cells, tissues, organs and the mind and makes survival and sustenance possible. As an endeavour dedicated to healing which is as old as life, description of Ayurveda as perennial medicine is appropriate.
- For all that Ayurveda is and has gifted over thousands of years, it is a jewel in the crown of India's cultural inheritance.

And Charaka talks about Ayurveda is shaswata, the shuthrasthana there is a famous couplet where he kind of inspired. There he says Ayurveda is shaswata; is eternal, and the meaning in which he says that he says the materials that we are dealing with panchabutas etcetera, these are all eternal; that is the substrate of Ayurveda. Suffering is eternal; there was no time, there was no suffering; there would be no future; there would be no suffering. So, suffering is eternal and the laws that we are using, like samavaya; that is a Guna inherent in a substance in dravya; that is a principle; that is a law that is eternal. So, in Ayurveda, all that Ayurveda dealing with, that is all eternal; Ayurveda is eternal.

This is the point, he makes there very, very thought provoking, but there is one more thing. Ayurveda is dealing with the whole sum and substance of Ayurveda is healing. Healing the mind, healing the body; if you take that away, what is left of Ayurveda? Now, this particular thing, healing that is as old as life. That is something we should

remember, which I started this whole series of talks with that. If you take the most basic molecule, the life molecule DNA, if you break that DNA, it will begin to heal.

We saw in the last lecture, how the DNA chain breaks and how they heal. So, it is inherent; it is not created by any of us. Or animals when they are sick, they go even moths and fruit flies do this; they know how to cure themselves. That is evolution to survive; life to survive is healing; that is essential; absolutely necessary; indispensable; that is also eternal. As long as life is there, the healing, the urge to heal is also part of it. So, since Ayurveda is dealing with it, Ayurveda is eternal. In that sense also, Charaka is right. So, I would say for all that Ayurveda is and all that it has achieved over these 2500 years, I would say that it is undoubtedly a jewel in the crown of India's cultural inheritance.