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

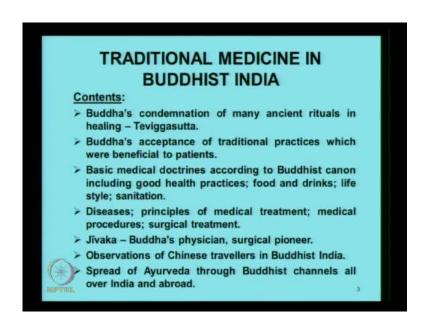
## Module - 1 Lecture - 2 Traditional Medicine in Bhuddist India

We have seen that the Atharvavedic period to the Ayurvedic period started in first century. There was a very big change in the practice of medicine. Essentially in relation to the practice of medicine, not so much in the theory medicine and that is the disappearance or the largely the disappearance of mantras and rituals. Now, this was because of the influence of Buddhism which was the dominant religion in India during those 1000 years. Buddhism not only influenced Ayurveda, a practice of medicine, but influenced every other aspect of human endeavor during this period.

By questioning the authority of Vedas, Buddha unbarred the gates to enquiry, fearless questioning, which has influenced Indian psyche ever since. In fact, a few 100 years after Buddha, the Indian systems of philosophy like Nyaya, like Vaisheshika, Memansa, Vedanta, they all questioned Buddhism using the same argument. Questioning the authority - this was part of the Indian tradition of questioning; another by fiercely opposing slaughter of animals in the name of worship.

Buddha succeeded largely in eliminating this cruel practice from all over India. It still remains here and there, but is largely gone. And thirdly, by his constant ministry for 40 years travelling largely on foot all over north India and establishing, preaching his noble way, by inspired talks, by logical discussions, he created a tradition of spreading true knowledge; winning over people not by force, but by appeal to reason. Now, this was again a tradition, which was followed by subsequent great teachers like Shankarcharya. So, everywhere Buddhism was a great influence and medicine could not remain immune from this change.

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Like earlier, I would like to give the contents of this lecture because we are covering large areas of time, history of India because in 20 lectures, I am covering 20 centuries. Therefore, it is necessary to have some idea of the topics that to be covered in this lecture.

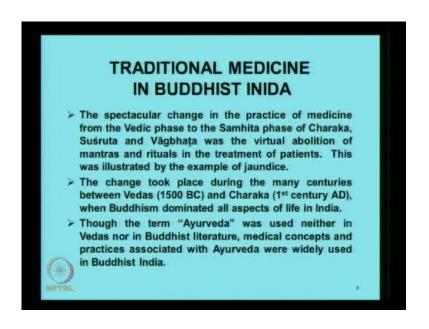
First of all Buddha's condemnation of many ancient rituals and later on Buddha accepted many of the traditional practices, if they were a benefit to sick people. Basic medical doctrines according to Buddhist cannon including good health practices, food and drinks, lifestyle, and so forth. And there are references to diseases, principles of medical treatment, medical procedures, surgical procedures - all these are refer to in Buddhist literature. You must remember, when we talk about Buddhist literature, what we have are primary religious texts. So, you cannot expect detailed discussions on anatomy, physiology and diseases; these are essentially religious scriptural texts. There are incidental references to these. So, we are actually gaining information, incomplete information, from these references, in what are essentially religious and scriptural works of Buddhism. That deficiency is always there.

And then we have a dominant figure a luminous figure of Jivaka. Jivaka was Buddha's physician and his life and the times, which we have forgotten in India largely, but if you go to countries like Vietnam, Japan, that is a very alive the tradition of Jivaka. They will have something to say about Jivaka. And the Chinese travelers, as everybody knows,

they came here in the sixth century, earlier also, and many of their observations are extremely interesting about the status of Buddhism, and something again incidental references to the practice of medicine.

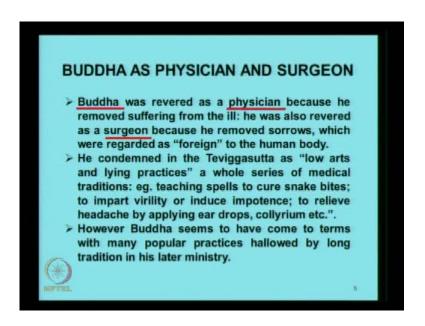
Lastly, spread of Ayurveda all over India, after all it was Buddhist texts or Ayurvedic texts, sorry, were written by Charaka, who lived somewhere in Punjab, Kashmir area. Shushrata was based in Benaras, and Vagbhata, the third of the Bruhatrayi, he was from Sindh. Now, all these text which were written in the north India, they spread all over India coming all the way to the remote Kerala. How did it travel? It travelled abroad; it went to Japan; it went to Vietnam; it went to Korea; it went to Tibet to China. How did it travel? All this travel took place through Buddhist channels. So, that is again a very interesting area; we should pay some attention to looking at that.

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This is essentially, I have already said this; part of the reason this spreading took place is just because of the sheer personality of the Buddha. Buddha was associated with the practice of medicine or any other practice it carried with it a certain seal of approval; that is also another reason, why it spread in a way which no other part to Indian cultural heritage has spread with this kind of force all over the world.

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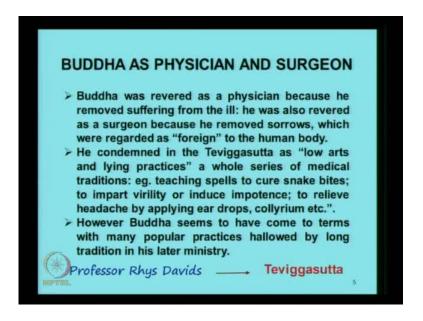
Buddha is always referred to in the Buddhist literature as physician and surgeon. Now, he was a physician in the sense [FL] because he removed suffering. People who are suffering from illness, from emotional disturbances, who are suffering and Buddha was the refuge [FL]. There are many number of incidences people going to him with physical suffering, mental suffering, family problems; hundreds would go to him. By his sheer presence, his look, comforting words, he could remove their sorrow, but how could he then be called? A surgeon.

Here, there is an interesting reference to this in Sushruta Samhita, which was around the time of Buddhism, the original Sushruta Samhita. There is a list of foreign bodies. This Sushruta, you know, was a surgeon. A lot of his surgical procedures had to do with the removal of foreign bodies. Now, his list of foreign bodies, splinters, harrow head, see gives long list, and along that, grief is also mentioned. In the ancient India, grief was considered foreign to the human body. It has no place within us, it is something foreign; so, it has to be removed. And Buddha, since he could remove the sorrow from people, which was something not sorrow, it is grief; there is a difference.

Sorrow is a passing event; it is an episode, but grief not only stops the machine, but damages the machinery. It corrodes space within; that kind of grief which a doctor cannot listen to everything, but Buddha could. Therefore, he was considered a Bishak

also. Now, there is an oldest Buddhist scriptural work is the Teviggasutta, which many people believe is the earliest utterances of the Buddha. It was a Rhys Davids rights.

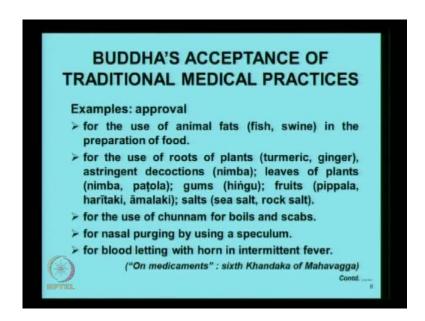
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Now, in that Teviggasutta, you will find Buddha condemning a whole lot of practices and he calls him low arts and lying practices. These are the terms which Buddha uses and look at the things, all serious of medical teaching spells to cure snake bites; the mantras being recited when snake bites; even now you can see it being done. Buddha condemned it. Then procedures to improve virility, induce impotence, all these were practiced at that time. To relive headache by playing ear drops, collyrium for the eye for eye diseases, all these Buddha had condemned in later literature, especially dealing with the Vinaya texts.

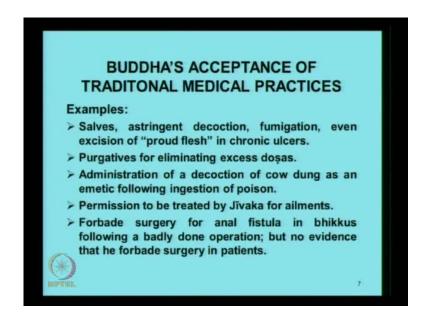
Vinaya texts are the set of rules Buddha had prescribed for bhikshus. Now, there, very detailed instructions are there about their clothes, about their sanitation, about their food; goes into minutest details about their behavior, conduct. Now, there you will find the same Buddha who had condemned many of these practices, he had softened his condemnation. If he found that something was helping people, even though he may not have been fully convinced, there is a tendency for him to accept.

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You will see many examples of this. Look at these: for the use of animal fats in the preparation of food; these are all specifically taken from Mahavagga which is part of Vinaya texts; for the use of roots of plants, turmeric, astringent decoctions, gums, fruits, salts; these are all remember used in Ayurveda even today. For the use of chunnam for treating boils and scabs. This is cauterization for use nasal purging by using a speculum; that was allowed. These are questions being asked to Buddha - sir can we use this? And then he would say - yes, you may use it. Bloodletting with horn in intermittent fever, a dreaded disease at that time and Buddha had specifically permitted that.

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Use of salves, astringent decoctions, fumigation, even excision of proud flesh in chronic ulcers, these are all approved by Buddha. Purgatives for eliminating excess doshas; Administration of a decoction of cow dung as an emetic following ingestion of poisoning; Jivaka his personal physician was allowed to treat himself and he forbade surgery. There is an example of a Buddhist bhikshu having a anal fistula; he got operated by a surgeon called Agasa Goto and that ended in severe complication.

The patient developed fecal incontinence and Buddha was asked - sir he is not doing well. When he goes and sees this suffering bhikshu, the first question he asked - how did you get this operation done? He forbade bhikshu skidding surgery on themselves, but there is nowhere Buddha condemning the use of surgery in ordinary people. There were two sets of rules: work governed about whether it is drug or the use of food or any other kind of a personal conduct or the use of medicine are applied to the bhikshus highly rigid, highly disciplined code; that did not seem to apply to the later; there is a difference in this. So, here, Buddha forbade bhikshus from having any kind of surgery, but there is no evidence that he ever said ordinary people should not get surgery done.

This question becomes important because surgery which flourished during Shushruta's time or even Jivaka's time, later on in the first few centuries of this present era like fourth, fifth centuries, there was a sharp decline in the practice of surgery, in the prestige which this discipline have, in the prestige the surgeons had, were all banished into the lower cast. This is what happened by fourth or fifth century; surgery on surgeons, they declined in public history; they were considered lower casts. This strange happening, this sometimes it is attributed to Buddhism. Buddhism was against their bloodshed and after all a surgeon cannot operate without bloodshed. This was the reason given, but there is no evidence anywhere that I have seen, Buddha condemning the use of surgery in ordinary people; this is not seen anywhere, but Budhist bhikshus, yes certainly, he did say they should not get this done.

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# MEDICAL REFERENCES IN BUDDHIST TEXTS ❖ Ancient Buddhist texts were primarily concerned with religion, philosophy and moral conduct. References to health, disease and medicine were incidental, but they do give much useful information. ❖ Digha Nikaya (DN) – a part of Buddhist sutta – listed śalya, śālākya, kaumarabhṛtya, kāyacikitsa and vājīkaraṇa, and also referred to viṣavidyā and bhūta vidyā. These terms cover seven of the eight branches of Ayurveda; rasāyana was left out because Buddhist philosophers sought nirvāṇa, not rejuvenation!

Now, the point which I made earlier, when we want to trace the kind of practice of medicine from between the Athorvavedha to Charaka, something like a 1000 years, we have a real derth of original material. We do not have any medical texts. Obviously, they existed, but we are not able to access them. And from Ayurvedic literature, we know, like, Charaka himself he says, I am redacting an earlier text Agniveshatantra. So, Agniveshatantra existed in Buddhist India. We know that it is existed, but is not available; nobody has seen it. Similarly, there are other texts, perhaps the original of Shushruta Tantra. We have Shushruta Samhita, which was reducted in the fourth century. Again based on the earlier text, but that is not available. So, there are number of original works which existed during that time. None of which is available in an authentic form or a complete form. So, we are forced to depend on Budhist texts which are essentially religious to reconstruct what medical practice was in the Buddhist period; that is a defect that we have.

Therefore, the Buddhist text that we depend on, that is Digha Nikaya, which is the part of the Buddhist canon dealing with doctrine. That book it gives these disciplines as branches of practice of medicine. Ayurveda is a term they whenever used because any term like Veda would not be used in Buddhist texts. So, they this is called thigicha, not chikilsa, is called thigicha. That is the term Buddhist books used for practice of medicine.

Now, here the branches mentioned are Shalya, that is surgery, Salakya, which is head and neck disease treatment, Kaumarabhrtya which is treatment for childrens' diseases, Kayacikitsa for internal medicine, Vajikarana enhancement for sexual potency and fecunditity, and also there are references of Visavidya - treatement of poisoning, and Bhutavidya, which are said to be due to the effect of planets, but also many of those symptoms were not ordinary symptoms, not explainable on the basis of ordinary causation, strange diseases and we will today consider many of them psychiatric illnesses.

All these are mentioned in these Buddhist texts and they cover 7 of the current 8 branches of Ayurvedha, but the only one which is left out, Ayurveda has 8 branches; only one which is left out is Rasayana. Rasayana is to increase the comforts of old age; getting old without infirmities; high-quality living, that kind of thing; this is what Rasayana does. Obviously, the Buddhists were not interested in this. They were interested nirvana. That could be one reason they eliminated. Rasayana is not mentioned; otherwise all the branches are mentioned.

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Now, the authority to text that we use during in this lecture, where you find most of these medical references: one is Digha Nikaya and this Milinda Panho. Milinda Panho is a very interesting, perhaps according to many of them this is one India's answer to Socratic dialogues. Because in this, in the form of a very interesting dialogue between

king Milinda, he was an Indoor vateran king with Nagasena, a Buddhist teacher, young Buddhist teacher. This is the form of dialogue; very powerful, sharp, highly focused, none of the hyperboly of Sanskrit books.

This the first copy; it was found in Pali and it is translated a very (()). In fact, in the beginning itself, this Milinda, that king was a very knowledgeable king and he will keep on asking questions to many of the scholars in those days, and he would defeat everybody; nobody would answer his questions. Finally, the Buddhist prayed and in answer to their prayers Nagaseena was born. He was a young boy already in his twenties and Nagaseena was camping and then this Milinda heard a great scholar has come.

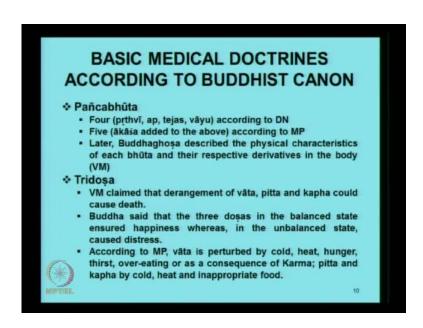
So, he goes to him and he stopped his chariot outside; went there and met him and then he asks Nagaseena, Nagaseena are you your arms? He said no. Are you the head? No. Are you the leg? No. Like in everything, he says no. Then he says, since you have denied all this, I tell you Nagaseena, there is no person called Nagaseena. That is how it begins; then Nagaseena replies, oh king, how did you come here? I came by my chariot. Are the wheels of the chariot, the chariot? Like that he asks all these. Finally, he says, since you have denied all this, I say there is no Chariot. So, that counter questioning, it comes; it is a very very wonderful dialogue, but within that, you will find many times like vata, pitta, kapa, constitution of the body, illness, many of these things figure in these dialogues; extremely interesting.

Vishuddhimagga which is written by Buddhaghosha, a very great scholar, who translated all the Buddhists classics, many of which is from Sanskrit, into Pali; that is really what has laid the foundation in Sri Lanka. All these Pali translations from Buddhaghosha, that is the foundational texts there, and Dhammapada of course, everybody knows that it is something like Baghvad Gita, a universal book of Buddhism, and VinayaPitaka, I already referred to it, that is dealing with the discipline or the way of life, the code of conduct; all these are dealt with VinayaPitaka; what to eat, how to live, a very great detail; some of it we refere that later.

Now, these are the text which primarily I have used in collecting information, medical information, which will be of interest to us. There are also what are called Jataka tales dealing with Buddhas many many lives. These are stories, but often based on what really happened at that time. For example, the teaching of medical students in Takshashila; we

have no historical records of what happened in Takshashila, but when you read Jataka tales, you can get a very good idea on how the students were taken there; how they were taught; how they were examined; many of these you will find very interesting where you can get the information of great value from Jataka tales.

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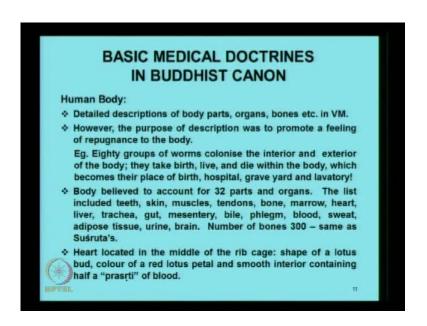
Now, the basic doctrines according to Buddhist canon: one is Pancabhuta, as you know, today in Ayurveda, this is a fundamental doctrine. The five elements, not the elements in the periodic table, but these are space, air, fire, water, earth; these five, they constitute the Pancabhutas and all that you see in the universe; all that you experience in the universe; they are all derived by permutations, combinations, evolution, of these five bhutas. This is a fundamental doctrine, human body, and all that you see outside, all made of these Pancabhutas. There is complete homology between what exists in the human body, what exists outside. What happens outside of these things will influence us, our body. What happens in the body, however infinitismal, it will be affecting the universe; like that, In other words human body is nothing but the cosmic (()). That is a fundamental doctrine and this in a Buddhist of Dhiga Nikhaya, there are only four, that is prithvi, ap, water, tejas, light or fire, vayu, air; ether is not there. Then, later on, in the Milinda Panho, that dialogue which I mentioned there, you will find akasha is added.

That becomes five and later Buddhaghosha describes these, all these five elements, their characteristic properties, like fire, its heat, light, these are all the characteristics; akasa is

lightness, space, etcetera. So, each of the prithvi is heaviness; so each of these, there are properties which are characteristic of these bhutas and what is derived from those in the human body. The tissues, the organs etcetera, which have evolved dominance of a particular bhuta, that classification is given by Buddhaghosha.

And Tridosha, another very fundamental doctrine in Ayurveda; we will be discussing all these later on, but here you will find Visuddhimagga. Again, there is reference to vata, pitta, and kapha; their imbalance could cause death. So, obviously it has something to do with health and ill health. Buddha himself says, when the three doshas are in a balanced state, there is happiness; when they are unbalanced, there is unhappiness or grief. Millinda Pan ho says vata is perturbed by cold, heat, hunger, thirst, overheating, or as a consequence of karma; these are all accepted in Ayurveda. Pitta and kapha, they are perturbed by cold, heat, and inappropriate food. These are concepts unacceptable in Ayurveda.

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Then we look at the human body; detailed descriptions of body parts. These are all found in Visuddhimagga, Buddhaghosha. Perhaps we will find the most detailed descriptions there. Description of Buddhaghosha, of all these descriptions, wants to create a feeling of remorsion to the human body. I give one example here. 80 groups of worms, they colonize the interior and exterior of the body; they take birth, they live, they die within the body, the body becomes they place of birth, hospital, graveyard, and lavatory.

It looks like that is the purpose of anatomy description by the version. The body was believed to account for 32 parts and organs, and the list included many of these tissues; I do not have to read the list; number of bones mentioned is 300, which is the same as Susruta's has mentioned, different from Atharvaveda and Charaka. There have been some 360, Susruta had mentioned 300, and here you find 300 which is same as Susruta's. The heart is located in the middle of the rib cage, shape of a lotus bud and it contains some blood; all these descriptions are there in Visuddhimagga.

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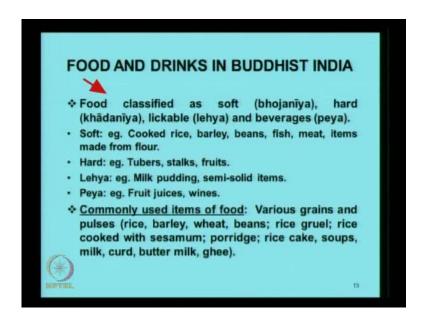


Now, good health was the highly priced and here is a quote from Dhiga Nikahya health is the highest gain; contentment is the greatest treasure; confidence is the greatest friend and Nirvana is the greatest joy. This is a quote from Dhiga Nikahya this is Dharmapada I am sorry. It did not sound like Dhiga Nikahya; this is of Dharmapada. Dharmapada has many (( )), very nice quotes, many of these, like very much like, Bhagavad Gita, you get that impression quotable, pretty, short statements. And great stress was laid on all aspects of healthcare which covered food, dining etiquette, hygiene, bath, oral care, eye care, and personal conduct. All these were highly emphasized, and elaborate attention to the construction and use of toilets. This is the only place I have seen such detailed account about constructing toilets and the use of toilets.

Ayurvedic text goes into this and here it is mentioned that Buddha's one of the groves, where the colony was staying, they were openly defecating everywhere and Buddha saw

this and he said stop; he must have laved to his constructor. And very detailed descriptions are given; how it should be done? How there should be privacy? How a person who is coming, if he wants to go in, he has to cough; that is this sign; If somebody else wants to come in here, how you should, where you should keep your clothes? How you should clean yourself? These are all mentioned in such great detail. How much attention they pay? None of these in our Ayurvedic texts you will find it. It is not mentioned anywhere. But here is the most detailed, some two, three pages he describes how the lavatory should be maintained; how should it be cleaned. That shows the kind of strictness with which they regarded hygiene; it is an eye opener; something totally surprising to me.

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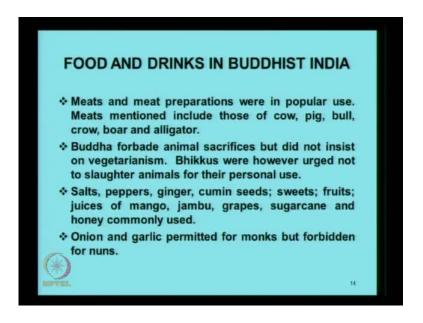


Food and drinks in Buddhist India: Food was classified as soft, hard, lickable, and beverages. And soft is cooked rice, barley, etcetera and hard is tubers, stalks, not very very hard because in all the Buddhist stories, everywhere, where Buddha is entertained or any other person is entertained, they will always find hard and soft always. It is like idly and sambar, like that. Always they go together and that was the practice here also; hard and soft are always served together.

Lehya lickable and peya drinking, and commonly used food items, they were familiar rice, barley, wheat, beans, rice gruel, rice cooked with sesame, that was a very popular

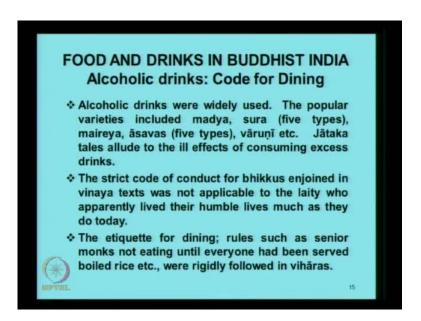
often served, Porridge, rice cake, soups, milk, curd, buttermilk, ghee; these are all mentioned very often.

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Meats, meats were often, there was no ban on meats; meat preparations were very popular and the meats mentioned include cow, pig, bull, crow, boar, alligator and remember Bhuddha's final meal, the last supper was pork. It was given to him by one of the labourers. He accepted hospitality at dinner; he went and ate; it was a pork that was served; then he developed severe abdominal pain and that was the next day he died. So, he would eat pork. The only thing he told the bikshus, the animal should not be slaughtered just for them; that was the only thing he forbade. If it was a male being served a community meal, and a Buddhist bikshu who was being invited, he could go and eat; there was no bar. Salts, pepper, ginger, cumin seeds, all these are what we use today; they were widely used that time also. And onion, garlic permitted for monks, but not for nuns.

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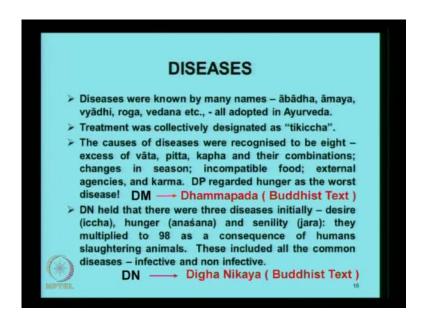
Alcoholic drinks: They were widely used. The popular varieties included madya, sura five types asavas, varuni, different types of wines. And Jakata tales lead to ill effects of consuming excess because [FL] talks about it, people, alcoholism, and the evils of alcoholism. That also existed at that time and a strict code of conduct for the bhikshus enjoined in Vinaya texts was not applicable to the laity. Etiquette for dining was very strict. When senior monks are coming there, everybody has to be served rice; then only the senior monks could eat. All these rules in the dining room very strictly observed.

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Now, diseases were known by many names abadha, amaya, all these terms synonyms which are used, roga, they are all used in Ayurveda also. And treatment collectively is called tikiccha; that was the term, Ayurveda the Buddhist medicine used. They never used the word chikitsha; they never used the word Ayurveda and the cause of diseases were regarded as eight, which again is very similar to Ayurveda. You will find excess of vata, pitta, kapha or a combinations of these; that comes to four; changes of season, incompatible food, external agencies, and karma, effective of past karma. These are all we considered the causes.

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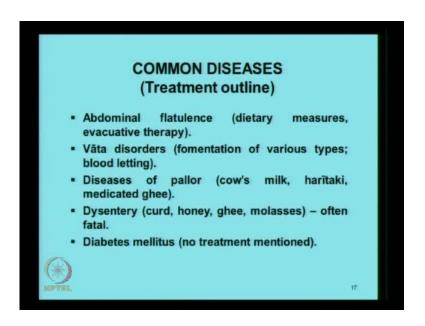


Dhammapada regarded hunger as the worst disease. And Digha Nikaya held there were three disease initially; this is interesting. Start with it humanity began, there were only three disease: desire that is iccha, which becomes passion later on; hunger, anasana and senility. These are the three originally, but they multiplied to 98 as a consequence of human slaughtering animals; this is again a dig at how it is being done; animals been sacrificed in the name of worship. That is what the Vedic religion especially Rig Veda etcetera.

There were sacrifices of animals. In fact, when you read the dialogues of Buddha, there are several instances where a Brahmin comes; invites him. I have a great havan, yagna, being conducted in my house, a very rich man, and we are sacrificing hundred thousand animals; so, please do come and grace that occasion. And Buddha talks to him. He does

not condemn him and the way, the sweet, reasonable he keeps on talking, something like that questioning again and again. Finally, this man says, Lord I do not want to do this. It is a very moving, how history of personality, how he is able to talk to him? What he was doing is essentially sinful. You should not take life like this. So, he came in because if a rich man sacrificed 10,000 animals and another man would sacrifice 20,000; so, his sacrifice becomes greater; more people would come to take part in the ceremony like this. That was the practice at that time and this was systematically eliminated by Buddha. So, here, when they say the diseases that we have, it is they are the wages of sin of killing all these animals; that is what he says.

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And common diseases: These are all frequently mentioned: abdominal flatulence, vata disorders, muscular skeleton disorders in other words, disease of pallor, anemia. There is some confusion between anemia and jaundice, but that is also there. Dysentery, a fewer disease because mortality was very high; diabetes mellitus is mentioned, but no treatment is mentioned.

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Daraka tikiccha: Daraka, there is no such word in Ayurveda. It is obviously Balaka tikiccha which they call it Daraka in those days. But there are no details available on how they treated children? Wet nurses: there are detailed acounts to that; how to select them, how they could influence the growth of these children; gynecologic problems we should disqualify women from ordination. Mother, father, chetana - these three were the basis for the growth for the birth of an embryo, agents in the formation of an embryo.

That was, there is no detailed description in Ayurveda. There is a really great detail on how an embryo is formed? Here there are no details except this. There is a paternal element, maternal element, and there is spiritual element which is called chetana; that is all it says. But there is a much more evolved form of the same theme being discussed in Ayurveda.

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Visuddhi Magga and Milinda Panho, they both refer to fetal development. They knew that it forms and then grows, but the time horizons etcetera, they are not mentioned unlike in Ayurveda. But the subject did merit consideration, even in Buddhist text.

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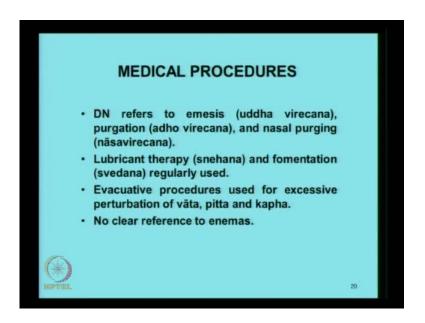


And then we come to medical treatment. How did they treat these diseases? Snake bite was feared; snakes were classified, herbal decoctions, cow's urine, ash, clay, charms and sucking of blood from the site; these were the measures used in treating snake bites. Ghrtas oil, honey, molasses, five kinds of salts and chunnam, for chronic ulcers I

mention that (( )); these were all used in treatment. And vegetable kingdom, five groups; under each, there are sub groups described; large number of medicine plant were used.

Composers, Jyotir Mitra of Banaras university have done special study of the subject. He has counted 435 medicinal plants are mentioned. But frequent use is only referred to 60 medicine plants. The use of metals, they do not find a mention, at least as far as I could make out, I do not find any metals being used in treatment; that Arthashastra did not seem to have existed at that time.

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Then medical procedures: emesis, purgation and nasal purging, all these three they have their own names like uddha virecana, adho virecana etcetera, but in today, they are known as emesis is vamana, purgation is virecana and nasal purging is nasya. All these procedures are used in Ayurveda extensively today as part of Panchakarma. Disturbed doshas are plentiful in the body and you want to eliminate them; these are the methods used in Ayurveda, but essentially the same procedure were used in Buddha's time.

Before doing these, they have to evacuative procedures, they have to be prepared by giving administering fatty substances called snehana and fomentation, body fomentation laguna turkish bath. This had to be done and then followed by these evacuative procedures. Now, essentially this was done in Budhas time. But I have not been able to find a clear reference to enemas as a part of this because the enemas are extremely important; perhaps more important than any of these in Ayurveda as part of

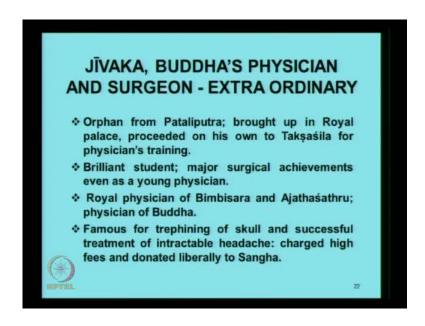
Panchakarma. But I have not been able to find a clear reference to enemas in the Budhist litreture that I have looked at.

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When it comes to surgical treatment of diseases, again you will find surgical treatment is advised specifically for intussusceptions; that this telescoping one intestine into another; that is intussusception. Especially in children, tumors, fluid discharge from different body chambers, body cavities, blisters which are abscesses, and anal fistula, and also all these surgical treatment, there are recommendations reports of that and cleaning wounds, application of corporate, topical application dressings, all these are mentioned the surgical procedures. Head and neck surgery was classified separately from general surgery which is again a practice which we follow today.

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Now, we come to Jivaka, Buddha's physician. A little time on this extraordinary figure is well worth it. He was an orphan in Pataliputra which was the capital of the kingdom, the Mauryan empire, and he was found as an orphan at the door step of the palace one morning. Bimbisara was the king and Bimbisara son Abhaya, he saw this orphan there and he picked up the orphan and brought him to the palace, and brought him as a prince. And as he grew up, he was a precautious child. When he was a teenager, he realized he was not really a prince; he was an orphan; so, he became conscious about this that I am going to make myself something; I do not want to live here lik this.

He left Pataliputra, put up and traveled all the way to Takshashila; you can imagine the distance from Patna today to Takshashila in Pakistan. Now, that distance it it is interesting because Takshashila was already very famous as a center for medical studies and for Jivaka to go all the way to Takshashila; that means a bypass Banaras. There is some argument; I will come to that later. The time of Susruta's, when did he live? This is a controversial subject.

If Susruta was obviously based in Banaras and if he had been very active as a surgeon, the Susruta's school flourished in the Banaras, why would Jivaka by pass Banaras and go all the way? Obviously Susruta had died and it had ceased to be a major center; that is why he went all the way to Takshasila. So, Takshasila when he arrived there, the teacher there was an Athreya; we do not know which Athreya; there were several Athreyas. He

was impressed with this boy who came all the way not as a prince, but ordinary person. He had no money. So, then he said - sir, I have no money. He was asked - do you have money to pay the fees?

He said I have no money, but I am willing to do the service. It was it was allowed in universities. So, he was accepted as a servant. So, he would do cooking, household work; that is how he studied. And there are number of stories in Jataka tales about his brilliance. In fact, the students complained one day that this Acharya was showing too much favor to this Jivaka. So, one day, that teacher came to realize this; he said to all the students, today you go to the shop and get the price of this particular drug, a medicinal drug. So, they all went there, got the information, came back; the teacher asked what about this? And the teacher asked about another plant.

So, the students said - you did not ask us to find the price of that. So, when he came to Jivaka, he asked about that; he gave the price; then he asked for another; then he asked for another, half a dozen medicinal plants; he gave the price of all these. So, then, the teacher said - Jivaka, I did not to find the price of all these; why did you find? He said - sir, that one plant alone you cannot use it; after all, you are wanting to treat; so, if you want to treat, you have to have all this to make that medicine; so, I found out. So, all the other students realized this man is a different kind of person; that was Jivaka.

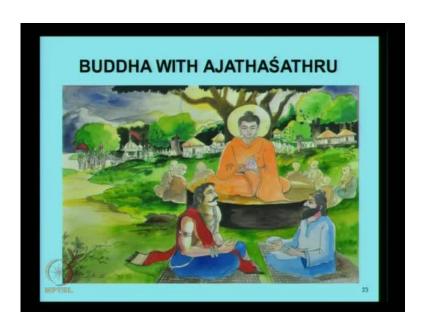
When he passed from there, there are stories about his examination. When he was coming back, the teacher gave him some money because he had no money to travel. On the way, half way through he ran out of that money and there was a big building; that was a rich merchant's house. So, he reached there ran out of money; so, he asked to the gatekeeper - is that anybody who is sick in this house? He said - yes, the sait's wife has a headache, a very bad headache and it has not been cured. He said - I would like to treat. So, you please tell her that I am a physician; I am coming from Takshashila.

So, this gatekeeper went inside and told this lady and she said, how old is this physician? He said - he is a young man. No, no, no. I do not want to see him because so many wise people have tried to treat me and failed; so I do not want this young man. So, he came and told Jivaka. Jivaka said - tell madam she does not have to pay me unless she is cured; on that condition let me treat her; so, he went there; he was allowed and he gave a nasya

procedure. He made a medicine himself, a nasal procedure, and she was completely cured.

Her husband came, son, they were all amazed and they loaded him with gifts, money, a chariot, horses, servants, and he came back to Pataliputra with all these riches. He gave it all to his father Abhaya, stepfather; gave it to him saying, this is all yours. There is a story like that; that was Jivaka. He was also the first in the description in Jataka tales prefining the scope, which you do not find in Susruta. And he removed two worms from a merchant who had a severe headache; the first refining operations mentioned in Indian literature; so, that was Jivaka.

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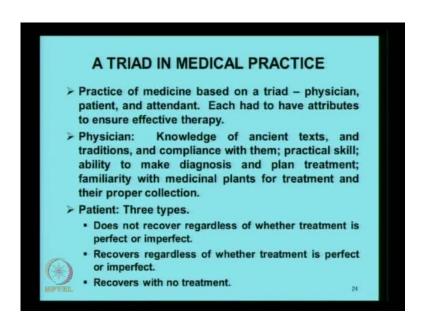


Now, this is a picture, an interesting. It is based on a sculpture in Barut. This is Buddha, of course, I do not have to tell you and the two sitting there, one is the king which is Ajathashathru and the other is Jivaka. Now, this story again is interesting because Ajathashathru killed his father Bimbisara. On the urging of Devadhatta who was a competitor cousin of Buddha, he killed Bimbisara, his father. So, he was struck by remorse and he could not find comfort talking to anybody.

One day he wanted to become a disciple of Buddha and Jivaka said I will take you to him. On a full moon night poornima, associated with Buddha's birth, Mahaparinirvana also. He took him in Rajgir, that is where this Buddha's grove 1250 disciples and as they entered he left his chariot outside; there was absolute silence. So, Ajathashathru was

frightened. So, he asked Jivaka, Jivaka are you trying to play trick on me? Are you going to betray me to my enemies because how can there be 1250 people with no cough, no wheeze, such silence here? So, he said you come with me and when he goes and sees the Buddha completely transformed. He is a changed man. He says may my son also have this kind of peace which prevails here; something like that. Now, that particular scene is the theme of a great carving in Bharath and this is a painting based on that.

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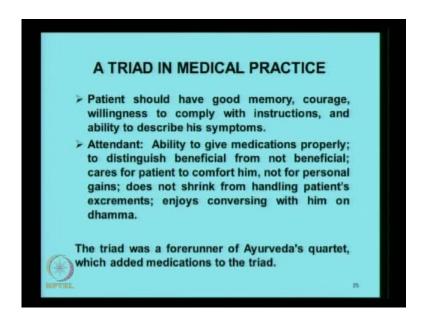
Now, in medical practice in the Buddhist literature, there are three elements: One is the physician; a physician has to have all these qualities; he has to have knowledge of texts and traditions. He has to comply with them; he has to have practical skill, ability to make a diagnosis, plan for treatment; all these he has to be able to do. Familiarity with medicinal plants, ability to identify them, but then look at the patient; that is an interesting... This tongue in the cheek type of description in his, he says patient there are three types; does not recover regardless of whether treatment is given or not. Second - recovers regardless of whether treatment is perfect or not and lastly recovers with no treatment. So, the whole purpose of treatment is being questioned in this.

And this is again, find in this in Charaka Samhitha as I mentioned because they have themselves doubts about the claims of medicines because Charaka Samhitha in the Athreya's dialogue, same thing in Ayurveda it became four, not tria; it is quadrant. It has added medications also for this. There it says all these four, there are four properties,

four qualities each; so, if all the 16 are in place, then treatment will succeed. This is what Ayurveda says.

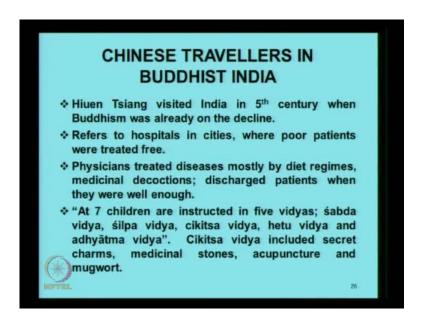
Now, that thing is introduced by Acharya Athreya and then all the students could respond. So, what do the students say is very much like this. He says - Acharya, when all we see in our practice, when all these four are in place and they have all these qualities, all the 16 in place, patient dies and when they are not complete, (()) may not be complete, properties may not be complete; patient recovers. So, there may be maybe the treatment and patience recovery, they are independent of each other. Something like that he says; again the same thing you find here. There is a certain amount of skepticism about the claims of medical practice.

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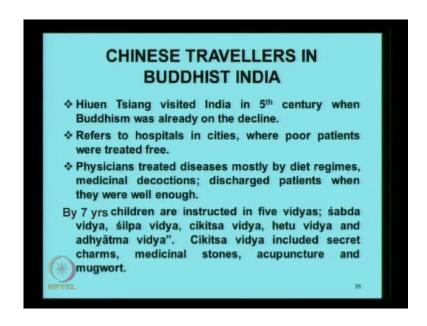
This is not unquestioning faith in other words and is tried in the medical practice, patient. We have considered the physician-patient should have good memory, courage, willingness to comply with instructions, ability to describe the symptoms. Obviously, does not through messenger. This will be patient will be directly being interviewed; attended ability to give medications, to distinguish beneficial from not beneficial, cares for the patient to comfort him, not for personal gains, does not shrink from handling patient's excrements, enjoys conversing with him on dhamma. Now, this triad was a forerunner of that quartet, which we see in Ayurveda.

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Now, Chinese travelers in Buddhist India: I will take only two, especially Hieun Tsiang, who spent the several months, several years in India in the fifth century. Already at that time Buddhism was in decline. In many of his descriptions, you will find how the Buddhist shrines were not being looked after, how the unbelievers are having their temples, these are the Hindus. So, all that description is there.

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Also he refers to hospitals in cities where poor patients were treated free, physicians treated diseases mostly by diet. Even today that is correct pathya; that was the central

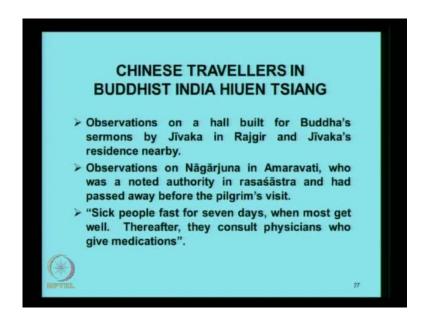
principle of treatment, medical decoctions were used and discharge of patients, but they were well enough from these hospitals. Then at the age 7, they were instructed, education begins in five vidyas: One is Sabda vidya that is language; Silpa vidya crafts; Chikitsa vidya that is health care; Hetu vidya that is logic, and Adhyatma vidya Spirituality; these were the subjects taught to children.

Chikitsa vidya included secret charms, medicinal stones, acupuncture, this is interesting. This is what (( )) We have no evidence that acupuncture is the way Chinese they do it; we were practicing it here. But the nearest we have in Susurtha samhitha, where marmas are described, there is a (( )) reference. There is a cervical adenoids, glandular enlargement in the neck. If you make a cut, there is a spot identified on the back of the leg that is 12 inches above the heel; I think that is what I remember. There is a murma called Indiravasthi; without damaging that you make a small incision there; that will have an effect on this; it will improve. There are references like these very far away, but it is not mentioned anywhere else.

So, whether this was a rampant practice when Hieun Tsiang came here, you must have seen such cuts being made not by using needles and what kind of theory and what kind of explanation they had, we do not know, but he does mentioned that. Another is mugwat? Mugwat is again what I find out is in Rauwolfia and Rauwolfia does not find the place in Charaka, Susurtha, or Vahbhata; it is not mentioned.

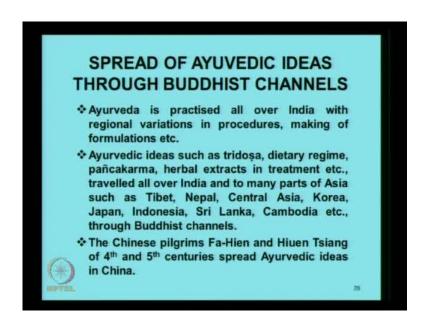
The first time we find Rauwolfia mentioned is Garcia de Orta; he was a Goan phycisian, who came in the 16 th century; the first European to come to India and to learn medicinal plants of India and write a book. Simple colloquies under some the simple drugs of India. 53 colloquies are there all about these medicinal plants. There he mentions or what we call Cobra wood or Rauwolfia. It is extensively used in south India and Sri Lanka; that is what he says. Used in treating fever, used in treating snake bite, used in treating mental disease. So, that he mentions mugwat here.

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And again going on with the Hieun Tsiang, there is a place he had visited in Rajgir where a place where Buddha used to give sermons, which was built for him for Jivaka. Jivaka used to charge very large fees for his treatment and that money he used to gift to Dhamma, to Budda's sanga. So, he had build a hall built for Buddha's sermons and Jivaka's own house was not far away and the reminisce of those existed; during Hiuen Tsang visits, he talks about that. He also went to Amaravati. He talks about Nagarjuna who was a great alchemist. There was a lot of description about that, showing that already Rasassastra had gained considerable ground India at that time. And sick people fast for 7 days, but most get well; this is his observation. Thereafter, he comes to the physicians who give medications.

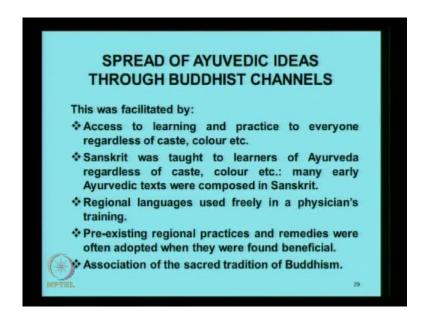
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Then we come to the spread of Ayurvedic ideas through Buddhist channels, a very interesting chapter in the history of medicine. Ayruveda is practiced all India over to with the regional variations like Panchakarma being done in Kerala or in Rajasthan; they would not be identical; there will be small changes in the techniques. But Ayurvedic ideas like thirdosas, pathya, panchakarma, herbal extracts, all these different ideas, they travelled all over India, too many parts of Asia such as Tibet, Nepal, central Asia, Korea, Japan, Indonesia, etcetera, Sri lanka, Cambodia, through Buddhist channel, that is how they spread.

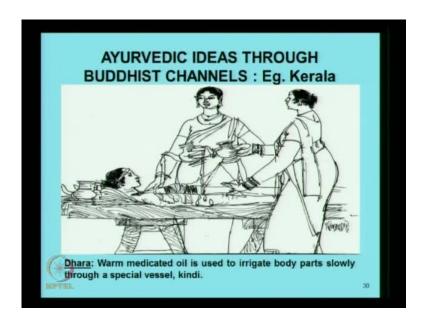
The Chinese pilgrims FA Hien and Hieun Tsiang, they spread these ideas in China in 4th and 5th centuries, not to replace the Chinese medicine, but the ideas were known in China. And this was this great spread was facilitated by many things; one is, everybody had access to this; there are no restrictions; unlike Ayurveda, initiation into Ayurveda, Brahmins were preffered; Khsatriyas were accepted; Vaishyas were also accepted, but Shudras were not accepted. If they were accepted, they were grudgingly accepted. All these restrictions were there, but Buddhist there was no restriction whatsoever; everybody was accepted.

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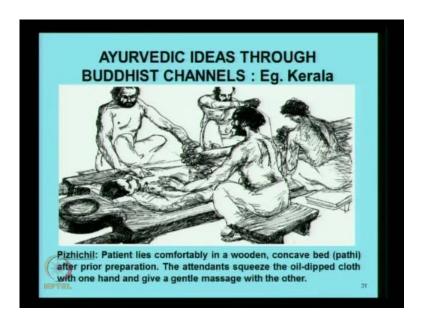
Second Sanskrit was taught to learners of Ayurveda; there was no restriction in Sanskrit learning. Many of the holy Ayurvedic texts were written in Sanskrit. So, unless you know Sanskrit, there is no way you could become a Ayurvedic physician and there was no restriction. Regional languages were used freely in teaching like Pali; it became such a religious language because Paali was the common man's language. Pre-existing regional practices in healthcare, they were adopted into medical practice, willingly. Now, these were all the reasons associated with Buddha's name. All these helped the spread of these ideas alone.

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Now, this is a picture of typical local practice of Kerala, which had been adopted into Ayurveda and this is a practice called Dhara, where a special vessel, I think you can see that lady is holding a vessel called kindi, it is a specially shaped vessel where oil of mild heat, that is being poured gently on that diseased part, maybe head or a joint etcetera. Now, that was a practice which is only in Kerala you can see which is Dhara which is used even today quite extensively.

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And this is of course even more famous Pizhichil with lots of people go to Kerala nursing homes to get this done. This is cloth soaked in the warm oil, medicated oil, which is used to massage, which is applied and gentle massage is given. This is being done on a special a wooden cot with the concave surface; that is where the man or the woman lies and this is done in this manner. These are extremely popular. Many patients, especially with muscular and skeletal disorders, lots of people come from different parts of India from other countries and they come every year. It cannot be just once you do it and it is cured. That does not happen for these muscular and skeletal disorders. Often conditions like osteoarthritis, these cannot cure them, but they become manageable.

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## BOWER MANUSCRIPT Birch bark document of 4-6th century, discovered by Col. Bower during a punitive expedition in Kucha, Central Asia. Written in Sanskrit using late Brahmi script: many extracts from Bhelasamhita, and other extracts which suggest the manuscript antedating Charaka and Suśruta Samhitas. Hoernle published an annotated English translation between 1893 – 1897. Those who wrote the manuscript were Buddhists – probably from North India and East Turkmenistan.

Then we have to talk about the Bower manuscript. Interesting story about the history, Kernel Bower was an Englishman and an Englishman was murdered in India by a group of people from central Asia and they ran away from here and Bower chased them. It was a punitive expedition and he went all the way to Kucha in central Asia and there found old monastery a manuscript. He did not know the value of it. Having accomplished major objective, he came back to India and he gave it to the Asiatic society of Kolkata. Doctor Hoernle, a great German scholar, he edited this. This is known as a Bower manuscript and it turns out to be an invaluable book. It is probably written by somebody from north India or maybe eastern Turkmenistan.

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### **BOWER MANUSCRIPT**

- Assembly of sages in the Himalayas: on a query from Suśruta, Kāsirāja explains the properties and uses of garlic (laśuna).
- References to the practice of foretelling a person's future by the cast of dice; practices and charms to protect against snake bites etc.
- Three doşas vāta, pitta, and kapha accepted; however there are passages which seem to include blood as a fourth doşa. This is echoed in Suśruta Samhita as well.
- Bower Manuscript illustrative of the influence of Ayurveda in Central Asia.

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It talks about assembly sages in the Himalayas, something very much like the Sushruta Samhita and there is a query from Susruta and Kasiraja Devudasa is giving replies. That is how the whole thing is written. But if you look at that, many of the references are prior to Charaka Samhita; there is no reference to Charaka Samhita; obviously this book was written before Charaka Samhita. So, it has a great historical value. That talks about vata, pitta, kapha; in the other words this was written, we can assume, but Buddhism was the dominant religion. But it again adds, blood is also a fourth dosha which is adopted you find in Susruta Samhita; you do not find Charaka or Vagbhata. So, this only illustrates the Bower manuscript in central Asia, how dominant Buddhism of Ayurveda was in even at that time before Charaka in central Asia.

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# HISTORICAL ROLE OF MEDICINE IN BUDDHIST INDIA Traditional Medicine in Buddhist India was a forerunner of Ayurveda. The basic doctrines and ideas on pañcabhūta and tridoşa; food and drinks; rules on healthy living; sanitation; diseases and treatment; medicinal formulations; pañcakarma; surgical procedures; and the triad in medical practice were notable in the medicine of Buddhist India. They became fully developed in the Samhitas of Charaka, Suśruta and Vāgbhaṭa. Buddhist ring is audible in Charaka and Suśruta; Vāgbhaṭa was a self-proclaimed Buddhist.

Therefore, the traditional medicine in Buddhist India was undoubtedly the forerunner of Ayruveda of today. The basic doctrines which I already covered extensively Pancabutha, tridosa, food and drinks, rules of healthy living, disease and treatment, medicinal formulations, Pancakarma, surgical procedures, triad in medical practice, these were all notable in the practice of medicine and Buddhist India and they become fully developed in Ayruveda.

Buddhist ring Charaka and Sustra and you will find clearly audible. For example, Sustra Charaka talks about Ksanika Vignana. What you see today, tomorrow when you come, suppose, there is river, this is a river here and tomorrow when you come or two hours later, the river is still there, but the water is not the same; is all gone; all of us are changing right there. Therefore, the knowledge is limited to the particular moment. This kind of highly philosophical ideas, Ksanika Vignana, is only transient of knowledge. This which Sustra and Charaka talks about is essentially from Buddhism. Therefore, the Buddhist ring is audible in Charaka as well as Susrutha, but Vagbhata, he was himself a self declared Buddhist. So, that is the very important role the Buddhist period played in the development of Ayurveda of today.