

# **Social History of Medicine in Colonial India**

**John Bosco Lourdasamy**

**Dept of Humanities and Social Sciences**

**IIT Madras**

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**Lecture 01**

## **Tropical Medicine**

Hello and welcome to the next lecture, Lecture number 21 and this is on a topic which is one of the biggest buzz words of medicine in the colonial context - which is tropical medicine, a term which you can never avoid when you are talking about science in the colonial context, especially in Africa and South Asia and other such -called tropical places. , what does tropical medicine actually mean? At a very simplistic level - I want to insist on that word simplistic as we will see why, in a while - the simplistic definition would be it is a field related to diseases and cures in, or of, tropics which is basically the tropical regions of the earth, that is, on either side of the equator up and down - between the tropics of Cancer and Capricorn. So, in geographical terms this would mean considerable areas in Central and South America, Australia, Africa, South Asia and Oceania. And to give you an idea of what this would cover in terms of land mass and populations, this is about one third of the total land mass of the earth and encompassing one third of the world's population. And again, talking in geographical and climatic terms, this area is characterized by excessive heat - naturally because of the closeness to the equator, and it is also marked by remarkable variations in rainfall. At a scientific level, it is understandable that these things would determine the nature of the flora and fauna and also some of those things which we are particularly concerned with - that is the disease causing agents like parasites, various flies - like mosquitoes which act as vectors - and the last one - that is the parasites and vectors - were considered to be at the roots of several parasite-borne diseases. Now especially towards the 1880s and 90s with the advent of the germ theory of disease, these gained greater currency. The tropics were also seen as the home of bacterial diseases and non-communicable diseases such as nutrition deficiencies like, say, vitamin deficiency. Tropics were also seen as theaters of other kinds of health issues like frequent snake-bites, scorpion-bites and stings - and the complications that they can bring. Thus, the field can encompass aspects of bacteriology, microbiology, virology, parasitology, epidemiology and also internal medicine. This is all a very simplistic, very geographic and purely science-based definition. However the term tropical medicine, from a historical point of view, and especially keeping the colonial context in mind, it is a little more than your geography or the biology based definition.

More than a branch of medicine - of course, it eventually became a branch of medicine - but more than that, it constituted an entire new paradigm, a new kind of ideology in the colonial context. We have to bear in mind that this field rises to sudden prominence in the 1880s, though the colonial game is almost two centuries old, this was also the period when there was a greater penetration - when more players were coming including say Germany for instance, or US penetrating into newer areas of Africa apart from Asia and Americas. The characterization of the field of tropical medicine was influenced very much by this new penetration and thereby of greater and more encounter with the people, landscape and associated challenges. Therefore, it involved ideological and moral construction. Some of you would have already heard of 'social construction of knowledge' - knowledge is not only based on this what is seen objectively: what is there and how it is there - but the understanding of it, of a particular thing, or process, is also influenced by the social choices, the social modes and customs and preferences of a particular society at that time - that is the social construction of anything: of knowledge or technology. Here also, there was that - beyond the geographical and scientific elements - social and cultural eyes, lens through which things were seen and the way this entire field was constructed. That is why we used the word 'construction' - it is an ideological construction.

What are the ways? What are those kinds of lenses, the ways of being viewed? The new areas, for instance, were seen and projected as dangerous reservoirs of disease and the people inhabiting these places were seen as wretched carriers of communicable diseases - and this due to the wretched climatic, physical, moral conditions and ways of conduct and behavior. Thus, more than a branch of medicine, it constituted a paradigm or an ideology. And, all of this was contrasted with the colonizers' own advanced condition - of being blessed with the 'benefits of civilization' and higher knowledge including scientific medicine. And all of this also has to be seen in the larger context: these align with the 'civilizing mission' ideology - of European reason coming to the aid, and cure of, Afro-American, Asian darkness and their lowly state of being - marked by ignorance, dirtiness, superstitions and witchcraft. Therefore, this entire perception, the way the field of tropical medicine is coming, it is marked and coloured by all these cultural prejudices and characterization which are very Eurocentric. And one important thing we have to be very careful here is to contrast all of this with what was happening in the 19th century. Earlier we have seen in the 19th century, early 19th century, they were talking about **diseases of the tropics** - see the difference between that and **tropical diseases**. At that time they were talking about the diseases of tropics, say the kinds of diseases in places like India. In that period, say in 1805, 1810, in that early part of the 19th century, the diseases in the colonies were not seen as something strange or belonging only to that particular place, very peculiar, idiosyncratic to that place. What they saw as different was the land and certain aspects of the land, certain climatic aspects for instance, the heat,

because of which the disease was seen to be present and pronounced in a particular virulent way. The disease was the same, but because of the particularities of the land it was more virulent and that too, especially for the Europeans, it could be even more dangerous and more virulent - as we saw at the time. It was basically they felt there was an essential difference of constitution between the European and the native bodies and which also served as kind of early inklings or foreshadows of racist ideas based on physical, biological features. Therefore, there was a skepticism about Europeans ability to adjust to specific problems like the increased activities of Europeans' spleen, liver etc., because of the particularities of the climate or other aspects of that land of the tropical areas. But diseases, as such, were not seen as being different. Therefore, there was no need for looking at it as a separate field of medicine and therefore, there were no special schools or colleges of tropical medicine, different lines of research. Disease was the same - same kind of disease, it was in any school, the same understanding could be applied here according to the different virulent ways in which certain diseases were being manifested because of certain conditions - otherwise there was a universal understanding of diseases. But now by the 1880s, when they are talking about tropical disease, there is that emphasis on the difference - it is a different kind of a disease which is very peculiar, idiosyncratic to the tropic or tropical areas - and which is not actually true. For instance, malaria which is touted as one of **the** tropical diseases, that was till recently very prominently present in Europe and it is not something of a disease which belongs only to say West Indies or say South Asia - it was there very much in Europe as well and of course, they had managed to bring it down or eradicate to a considerable level. But the reasons for that was not because there was some change in the temperature or some other change in the physical geography of the place, but rather that mitigation was done due to efforts in other directions - for instance, improvement in socio cultural aspects and economic aspects of life. Considering all this, we can say that to a considerable degree, the category or paradigm of tropic was in fact a cultural construction and again very much aligning with other cultural colonial cultural baggage, the kind of things which we saw in the medical topographical reports, the kind of essentialism, the kind of stereotyping and all that. Therefore, this also helped to legitimize colonial rule as a kind of a cure, as a kind of a light: all these god-forsaken places and people left to the mercy of the climate and other factors and they needed the hand of modern science, the white man, which meant, now it is seen as a new field of disease, which means it needs new understanding, new lines of research, new institutions, new training which the white man was supposed to be better equipped to do. And at a very practical level, the penetration and the greater penetration, creation of a newer colonies in Africa or even if it is a older colonies like India they were penetrating into new areas say for instance, into what used to be wild forests - now, they are being cleared for enterprises like plantations. - in either case, there were all kinds of hurdles, for instance, hurdles in the forms of mosquitoes and other forms of parasites and germs causing very dangerous and

inhibiting diseases like malaria - prohibiting their entry - free and easy entry. Therefore, the close connection and relevance of the continued exploitation meant that this new field will also acquire a special status and it will earn attention and particularly funding from government and also other sources like for instance, I was talking about tea plantations. Those companies or mining companies which felt their freedom of movement challenged by these kinds of diseases, showed lot of interest in funding - including some of the institutions and research and surveys and prevention measures and the overall establishment of this as a new field with all these facilities, which meant that the direction of the funds was not going much towards those socio-economic dimensions which is what I said really helped mitigate or eradicate some of the same diseases like malaria or cholera in Europe. Right from the beginning, the very approach was very skewed - the conception of what is tropical. This is something we have to bear in mind.

Going to the field - some of the particularities of the field: Patrick Manson is hailed as the father of tropical medicine and he also played a very important role in the processes explained above - in terms of topical medicine being looked and differentiated as a new field because Manson felt that tropical medicine had to be a special discipline because he firmly believed in the instrumental role of physical geography and climate. He was very firm in his belief and his advocacy that diseases in the tropics are not the same as diseases in temperate areas. It was not that it is just a difference in degree (as they earlier felt: it is the same kind of the disease in the temperate but then it is only expressed in a different kind of a degree, here that is not the case), the disease itself is different.

Who was Manson? He was a Scottish physician who, in fact, had the practical experience in many places outside Britain like in China, Hong Kong and Taiwan and once he went back to Britain, he lectured at London on tropical diseases and in fact became the chief medical officer to the colonial office and through his influence and his stature and all his works in tropical medicine, he founded the London School of Hygiene and Tropical Medicine in London on October 2nd, 1899 (that is actually the 30th birth anniversary of Gandhiji, that is the day on which this institute was born!). Then he also became the first President of the Royal Society of Tropical Medicine and Hygiene. All these names are also very important because you can see the whether this institution or the society – you can see how the field is getting institutionalized and having its presence in the metropolis itself. How what is happening in the periphery is impacting on medical education or scientific activities in the metropolis. Manson's major contributions to parasitology include his work in establishing mosquito as the intermediate host or vector of the filarial worm that caused the elephantiasis disease. This is the first example of vector-borne disease transmission - you can understand how crucial it was to the emerging field of parasitology. That is particularly significant in the context of germ theory of disease and all the new interest in bacteriology. But what parasitology meant was the move to go beyond minute bacteria to more complex life forms and encounter

between the human body and such more complex life forms as any of the protozoans or helminths or worms and the vectors which carried them. Disease, now meant more complicated processes with complex life form. Just as in the case of elephantiasis, Manson proposed a similar kind of connection between malaria disease and mosquito as vector. This was promptly picked up by Ronald Ross who eventually discovered the vector, working in India and for which he got the Nobel prize - the vector was female *Anopheles* mosquito. Manson's subsequent collaborative work with Ross was very very instrumental in the rooting of tropical medicine as a distinct field - both here in India as well as generally, at the world level and putting malaria (which, as I said, was touted), as one of the main tropical diseases. Malaria was one of the first and central diseases of that emerging field.

In all of these things, there were two things which were sidelined. We have been seeing about how tropical medicine emerged and how it was not just about the literal meaning of tropic and how it was constructed and all that. In all of those things, in all these discussions, there is not much attention given to the role of colonialism itself and its various projects - like I said - the plantations or various digging works related to railways or canal construction or the technologies which were created for faster movement like rail transportation or steamship and other things. Basically the role of colonialism and its projects in creating those socio economic and environmental conditions, degradations, evils and mobilities - that in fact provided the ideal conditions for the coming and the aggravation and spreading of many of these diseases. It was almost projected as some kind of a pathetic situation of the tropics, of the people, their manners, the idiosyncrasies of the place, its culture, civilization and all that. But in fact, the very project and process to which all of these people belonged, the colonial project itself had its own particular consequential contributions to the spread of these diseases. And the other important thing is that there was not much focus on measures which should actually mitigate or neutralize the issues - all these evils and mobilities created by them, or things which are already there. One of the things that they were claiming was that they were a responsible government on a 'civilizing mission', they had a great obligation and responsibility towards the people; that they had been ordained to rule. Given all that, one would expect that the state would have concentrated on these kinds of things. Just to recollect what we said on earlier occasions briefly - we were talking about social medicine - medicine is not just about curing or even preventing using particular purely medical methods like vaccine or other prophylactics. But medicine, health, well-being is also related to a whole lot of socio-cultural, and particularly, economic issues: the working conditions, living conditions, housing, hygiene, sanitation - for all of which, the government has a huge role. Of course, people also have their responsibilities for hygiene and other such things - the food intake and all that. But even that ability to buy food, the purchasing power, the availability of food (which also has to do with famines) - depended on the state's actions. In fact, the famines, are more

pronounced in colonial situations. Those are other factors which actually contributed to the host of elements which produced or propagated these diseases at a higher scale. The government was not doing much on those issues as much as it was projecting itself as a great saviour with its special armament to address this special new scourge affecting entire humanity. On that note, we will close this lecture. Thank you.