



Prof. C. S. Deshpande Memorial Lecture

Cancer and Education

By
Padma Shri Dr. Rajendra Badwe
Surgeon and Oncologist

Mumbai, 19 May 2023

WELCOMING



Shri. Avinash Chatorikar, Director, Vidyalankar Dnyanapeeth Trust
welcoming Padmashri Dr. Rajendra Badwe

LECTURE



Padma Shri Dr. Rajendra Badwe delivering Memorial Lecture



Opening Remarks by

Dr. V. N. Gupchup

Educationist & Member of Governing Board, Vidyalankar Institute of Technology

Padmashri Dr Rajendra Badwe, Dr. Rohini Kelkar, distinguished guests, ladies and gentlemen, may I join Avinash in welcoming Dr Rajendra Badwe and the esteemed audience for this fifth lecture of Professor C. S. Deshpande Memorial lecture series. We have just seen a documentary showcasing Professor Deshpande's achievements as a student and later as a founder of Vidyalankar.

A brilliant student in his college days, never letting the first rank slip out of his grip in the University examinations as well as the national competitive examinations. One can call him a veritable genius and a scholar of his capability who would normally be engaged in research activities. Well, he did pursue research as seen by his stint at the Tata Institute of Fundamental Research or in the high level engineering design in the sector of the Indian Railways; yet he gave up those avenues and got himself immersed in the field of teaching engineering students with particular emphasis on his first love, the subject of mathematics. Thus, was born the institute of Vidyalankar, initially as we have seen as a modest effort in 1960, only to grow and expand from a huge complex, consisting of excellent coaching classes for a variety of competitive examinations to an engineering college, a polytechnic and a school of Information Technology.

In the city of Mumbai and in many parts of Maharashtra, the name Vidyalankar is synonymous with quality education. All undergraduate programs at Vidyalankar Institute of Technology are accredited by the National Board of Accreditation and are permanently affiliated to the University of Mumbai. All the programs of Vidyalankar Polytechnic are also accredited by the National Board of Accreditation. This is indeed a testimony of Professor Deshpande's commitment to his task of educating young minds. One can never over emphasize the need to keep in mind the founder's vision. Hence, the vision of Vidyalankar Dyanapeeth Trust and the Deshpande family's wish to carry out some activity to perpetuate his memory. There can be no better activity than organizing a memorial lecture series, a public lecture delivered on or near Professor Deshpande's birth date-19th of May, every year, in memory of our founder.

The Memorial Series invites eminent speakers from within the country or outside, to deliver lecture on varied topics. These would include education, science and technology, finance, socioeconomic issues, national development and so on. It is envisioned that

these lectures would provide an opportunity to friends, colleagues, and well-wishers of late Professor Deshpande and Vidyalankar to remember the founder with affection and reverence. The lectures will also inspire the younger generation to believe in the pursuit of excellence and higher achievements.

The inaugural lecture of this series was delivered by Dr. Narendra Jadhav, former member of the Planning Commission and then, a member of Rajya Sabha. Dr. Jadhav spoke about making India, higher and technical education globally relevant. The second lecture was delivered by a renowned scholar and engineer and an economist, Padma Bhushan, Dr. Kirit Parikh. He spoke about low carbon strategy for inclusive growth. The third lecture was delivered by Padma Bhushan, Dr. Shashikant Chitre, who spoke on the subject of “Origin of life in the universe.” The fourth lecture was delivered by Padma Vibhushan, Dr. Anil Kakodkar, Chairman, Atomic Energy Commission of India. He spoke on the subject of “Taking India forward - The role of educational institutes today.” The fifth lecture of the series will be delivered by Padma Shri Dr. Rajendra Badwe. Dr. Badwe is an internationally renowned speaker and an awardee of several awards in recognition of his stellar contributions to cancer care. He was conferred the Padma Shri by the President of India and the Lal Bahadur Shastri National Award for excellence in public administration, academics, and management, both in 2013. His international recognition includes prestigious awards from the National Cancer Institute in the United States of America and the Union for International Cancer Control – UICC, amongst others. Under his stewardship, the TMC had the honour of plenary session and presentations at the American Society of Clinical Oncology annual meeting in two out of three years in the last decade. A feat that very few cancer centres in the world have achieved. Ladies and Gentlemen, it gives me great pleasure to welcome Dr. Rajendra Badwe and invite him to deliver his lecture, thank you.



Cancer & Education

Padma Shri Dr. Rajendra Badwe

Surgeon and Oncologist

Thank you very much Dr. Gupchup for such an elaborate introduction. Dr. Kelkar, Professor Deshpande's family and friends.....

Talking about cancer few years ago would have been slightly out of place because there were not many who wanted to talk about it but in today's world, there is probably every family that is touched by this disease and if not, some neighbour in and around has had some exposure to this disease and then what follows as an aftermath of the wrath that the disease plays havoc in everyone's lives. I must say that Professor Deshpande's contribution to education is phenomenal and we also to some extent at a hospital follow almost the same rules that are embodied in the Vidyalankar Institute, primarily to identify niche areas that are nationally important and wherein education can be imparted and also on one hand to teach something which is relevant, to pass examinations; on the other hand, also teach methods of learning so that we can reinvent, rediscover ourselves every time we face a new problem.

With that, my today's talk will be based on "Cancer in Education" which has essentially two components - cancer must be linked with public education- the first part of my talk wherein we need to be aware about this disease, thus apprising about the aspect of awareness and the second what needs to be done for managing this scourge with education. So the first part is of greater importance according to me and let me take you through what is exactly happening in the present. It is also customary to define the conflicts of interest -. one that I am extremely fond of mathematics, so there will be lots of numbers that will come in my talk and the second, is that I am extremely proud of what happens in India, so my biases would be talking a lot of good things that happen within India.

So with that let me take you first through, what is required at the level of public education so that we don't fear what cancer is. Let me give you the first example of why we should not fear cancer. There are three major diseases that affect us with aging, and these are cancer, blood pressure and diabetes. If I were to look at anybody diagnosed with either of these three diseases, say at age 50, on an average I look at age 70, I would find that less than 50 percent of the population suffering with either blood pressure or diabetes would still be thriving. With cancer, a fair number of 50-70 percent of population in India, would

cross the 70 years of mark and yet we fear cancer. If I am told that I have diabetes, I will probably take care of it, regardless of the fact that the decisions of taking medications will be for lifetime. For cancer, the medication at worst will be for upper limit of about a year or so and consequently we would not need any medications beyond that period of one year but ironically, we fear cancer more than the other vulnerable diseases. It is quite apparent that the fear of cancer has an aspect of human psychology embedded in the psyche of common people. The underlying reason herein is that the lives which are lost due to diabetes and blood pressure start somewhere between eight to twenty years of age after diagnosis whereas the lives lost due to cancer are from one to three or four years after diagnosis. So, the loss of lives due to cancer happens within a very short time of diagnosis. This leads to less coping ability of the people afflicted with the disease and those of the family of the afflicted souls. Thus, the fear of cancer is the psychological fear of this approaching death and the inevitable fatality of life.

The common cancers in India are cervical cancer, breast cancer and oral cancer - for these types of cancers, the recovery rates are more than seventy percent. Seventy percent of cancer patients will survive and cross the age of 70 to 80 years; so one shouldn't be worried about the survival rates but let's look at some important numbers. Here are some numbers and if you look at what happens in rural India- on an average, out of every one lakh population, about 40 to 50 will get afflicted with cancer, if I were to stay in Barshi. The same numbers, if I were to stay in Pune would change to around 65 to 75. If I were to come to Mumbai, Bangalore, Kolkata, Delhi, the same number would be about 100 per hundred thousand and if I were to move to USA, the same number would be about 300 to 350. Yet in our mind, we have the presumption that the West is the best. You might stand up and say that we might be missing patients in rural India, or it may happen that people might be just left undiagnosed. To some extent, it might happen in approximately in a population 2 million. In various parts of rural pockets wherein we have house to house survey annually, we find that there are no cases of cancer. This 40 to 50 number that I quoted earlier, is of the places where we had house to house survey and there isn't any single case of cancer.

In addition to all these cases, the same statistics are so true, for example, in the prevalence of breast cancer in Barshi, where we have our registration facilities with a cancer registry unit functioning since 1982. The startling fact herein is that the incidence of breast cancer cases is nine per hundred thousand in women. Nine! This number in United States is 120 per hundred thousand. About nine years ago, Bill Melinda Gates Foundation pumped in about two million dollars in Barshi to understand about this disparity and unravel the secrets which has kept the numbers of cancer patients at just nine per hundred thousand and has continued to be nine for the last 30 years. They just wanted to decipher the reasons of such stark numbers so that they can export something from Barshi to United

States. This transition obviously is a hallmark of urbanization as we move from rural to semi-urban, semi-urban to urban, urban to Metropolitan India or Metropolitan world. The numbers of cancer cases varies and one can witness a five to ten percent transition in the habitat with every census. In every census, you will find the degree of urbanization increases by about five to ten percent; in some pockets, there is also a transition of population from one area to the other, thus leading to an increase in the overall change in the number of cases. You will understand that BRICS countries- Brazil, Russia, India, China, South Africa are also part of this disparity as these are the countries where the component of urban urbanization is rising, thus progressing from developing towards developed countries. India is the only country where, for the last 25 years the numbers of cancer cases have maintained a straight line. In this context, the number 100 in urban population has continued to be 100 for the last 20 years; exactly similar way, semi urban numbers have remained the same and rural numbers have also remained the same but overall, the absolute number of cancer has increased because of more and more urbanization.

So let us look at the imminent differences in the incidence of cancer cases which is existent in United States and India and the reason of such a big difference. A great majority of the differences are explained by the incidence of the prostate, lung, colon, and breast cancer- at least these four cancers account for the huge difference between India and United States and within brackets I have written “S” as, some of these cancer cases are screened in United States and some of them are screened in India. In India, only breast and cervical cancer are screened, no other cancer is screened in India. So, screening itself increases some numbers which I will allude to a bit later in my lecture but suffice to say that such huge differences like 60-10 cases in lung cancer, 55-6 in colorectal cancer and large intestinal Cancer. A lot of it can be accounted for, especially for the large intestinal cancer, to the diet that we have, the kind of spices that we use, the number of red chilies and the green chilies that we use, the degree of non-vegetarian diet. So when some Indian says that “I am a non-vegetarian”- he would have in his plate about five or six things; one of them will be either chicken or mutton or some fish but there will be lots of other side dishes and if I were to get out of the cities, then a great majority of the non-vegetarian dishes would be served with a nice green chili on top and the gentleman would merely bite into it. We look down upon it but please understand -there is a science behind it. If there are enough spices, enough chilies in non-vegetarian diet, in a diet which has foreign DNA; the duration for which the foreign DNA can come in contact with the intestinal mucosa and the effect it will have on the intestinal mucosa - is induced by spices and by chillies. This fact of intestinal hurry induced by spices is the factor that prevents lots of cancers and you will be surprised that being constipated is hugely unsettling for an Indian though it is not so for a foreigner in the western region.

Moving ahead, we were working on a drug for breast cancer which had the side effect of frequency of motion and occasional loose motions. This study was done in different countries and in all these international studies, it is a norm that if there is an adverse reaction reported by any patient who is on trial, it should be informed to all the trialists. Typically, I would get one letter at least every week; we had about 54 patients on the trial, and we ran that trial for about four years. For four years every week, I would get at least one letter from some other country but the central agency informing that if somebody had loose motions, he always used to wonder - not a single lady with breast cancer who was on the trial ever complained that she had loose motions.

Finally, when we finished the trial, we decided that we will ask every individual as to what is happening, but by then, the drug had stopped and a lot of women were now complaining that “Potha saaf hota naahi”, so you know being having a good motion is a norm for us and if it doesn't happen, it unsettles us and that's one of the reasons why the numbers are 55 and 6. If you look at the Western diet and somebody says “I'm a non-vegetarian” - it will be either cold cuts for the breakfast, or there will be a blob of flesh in the form of a steak with a miserable vegetable in the corner and without any spices at all and he would merrily bite into that flesh leading to a state of being constipated. We cannot adopt this type of Western diet. We say that our Indian diet is the best because we are protected, we are protected by what we eat today. That's the good part of what we do as our culinary habits, as food is an integral part of our Indian culture.

Having known the numbers, let's move to the reasons of the fatality rate as many people die of cancer every year in India. These numbers are pretty reliable in cities, these are well documented, so we know that out of 100,000 population, (age standardized), about 65 individuals die of cancer in India every year. The same number in the United States is about 106. We are still better off, and we can be even better. Let's look at these aspects in a more comprehensive manner. The numbers are about 1/4th, sometimes 1/8th of what is in U.S. These small numbers, which is close to 40 percent are related to cases induced by tobacco. Another 15 percent are related to obesity. This is a problem quite akin to the advice that we give to others to stop smoking, to lose weight etc. My wife would agree that I should go for walks for the next five days, at least every day in the morning.

The third kinds of cancer cases is 15% of the total cases of cancer and are the infection related cancers. These infection related cancers are very steeply on the vein, they are reducing at a breakneck speed in India. We don't know why most of the infection related cancers are reducing at a breakneck speed. Cancer of the cervix, uterine cervix in women accounts for approximately 24 women out of 100,000 every year. This particular 24 number today in Mumbai stands at a number of 7 whereas in United States, it stands at 6 a number. We, as Indians are no different, but the question is what have we done to get this

number? We haven't done anything different; instead, we have just allowed a good personal hygiene in our men over a period. It is quite interesting to know the ways of maintaining this personal hygiene. This has happened because of privacy of bathroom running water. In Barshi, there are two areas - separated 15 kilometres away, there is a rural Barshi and there is a semi urban Barsi, a textile town that has come up in the last 20 years. It was found that in the two different areas, Barshi rural had 28 women being affected by cervical cancer every year out of hundred thousand women whereas Barshi urban has the same number standing at 15 within five years of urbanization. What has changed in these years to witness this gap in the cases of cancer? They have a municipal corporation; they have running water and bathrooms in every household for individuals to have their own bath in the privacy of bathroom. Despite all the means, the person in rural Barshi who has his bath in his undergarments at a common well cannot have the required genital hygiene, thus leading to higher and higher concentration of HPV virus under his prepuce growing to a large amount. The undergarments have prevented him from getting himself washed adequately. One intercourse with the lady in the house and would allow the whole load of HPV virus transferred from his body and deposited in the lady's body with no other choice but to get infected with cervical cancer. As the number of cases of 28 per hundred thousand gets reduced to 15, and even reduced to seven by the time you come to Mumbai is the gross realization of the need for hygiene and sanitation in our lives.

Apart from this case, there are many other things that are happening in our periphery. One good example is of Muslim brethren in Barshi urban, Muslim brethren in Mumbai and Muslim brethren in Middle East. All women of these communities have incidence of cervical cancer which is at a number of five per hundred thousand. Why should it be five in Barshi urban why should be five in Barshi rural too. The underlying reason is that they have had circumcision. I am not asking everybody to have circumcision but please understand that it is this very purpose of religion which ultimately aims at improving our lifestyle and our quality of life leading to a better, happy healthy life. The same precepts can be taught by somebody to our young children.

Adding to these facts, I would like to mention about a place in Rajasthan, which I had visited for a cancer detection camp and post camp, we were taken to a household who had arranged for all the camp and the gentleman therein said that they have some very old document. It was really an old document on parchment and written in a language which I couldn't understand but the gentleman humbly read it out for us. The parchment described the jobs of every individual in a family; so the man of the household was supposed to provide for the family protection, money, everything. The lady was supposed to look after the family as far as all aspects of household is concerned. The third thing which was so remarkable that the grandmother is supposed to teach grandson about

important tips on genital hygiene between the age of 9 and 11 years. The tips were an excellent piece of advice on cleaning the genitals and about retracting the prepuce which covers the tip of the penis. This retraction process is not possible physiologically till the age of seven or eight and if it is forced it produces a disease called paraphimosis which is a surgical emergency. So, the paper very clearly mentions the do's & don'ts of sanitation and if practised, this would lead to a decline in the incidence of the infection related cancer cases.

I am going to give you a few steps that have been taken to reduce cancer related to the consumption of tobacco and apprise you about some deadly figures regarding this type of cancer. About a million tobacco deaths happened in 2010 in India. This data was published in the New England Journal of Medicine, one of the topmost journals from Harvard University. Another startling number, that of 15% of population, who are smoking, die every year due to lung cancer. If somebody stops smoking at 50 years, this number of 15% reduces to 6%. That's not actually 15%, that's 16%. If we imagine 16% reduced by 10%, that's a huge reduction in the possibility of dying. If somebody stops at 30 years, the reduction in fatality is two percent. So, we can witness the number of fatal cases being reduced from 16% to two percent, if we quit smoking. Thus, it is never too late to stop smoking, to stop the deadly killing related to tobacco. The governments usually follow this triple, half and double policy. Triple the tax, the use reduces by half and the revenue doubles-the French paradox. Do we know the reason of such low cases of smoking? The underlying reason is that the ambient temperature of the atmosphere outside is generally very high. We say that in smoking, an individual inhales, which literally means the intake of the smoke in his lungs. It can be said that this extra smoke might be extremely discomforting as it's nothing but a huge amount of heat that goes right inside the core of his body, leaving the individual in a completely unsettling situation. Thus, our Indian smokers are mouth smokers, they don't inhale as they do not wish to inhale the heat. If you see an Englishman smoking, what comes out is a very smoke of a different colour compared to what has gone in whereas for Indians what comes out as smoke has little difference, not great amount of difference because all that is in mouth- is limited to upper larynx and pharynx -the region where our cancers are thriving, precisely in the oral region. I had shared the statistics wherein the numbers of cases of oral cavity cancers compared to the West are much higher in the East. So, if you were to stop, or reduce tobacco use, there will be overall reduction in cancer, reduction in blood pressure, reduction in heart attack and strokes, reduction in general of the reason and need of visiting hospitals- thus causing mortality to reduce remarkably. It is in fact, worth appreciating that the vegetable vendor, the fishmonger and many others, come to our household, to our doorsteps to sell their bit, which are undoubtedly, the healthy practices but ironically, we walk all the way to some shop to buy cigarettes. I wonder about this incorrigible road to Hell.

Talking about infection, I spoke about running water and potable water, I spoke about personal hygiene. Apart from these, good food preservation is another important component which is not so much practised in Western India. I mean majority of the places where electricity is available, refrigeration is available and food preservation is seen but in general, I would advise everyone to cook the food on a daily basis and consume on the same day. This age-old advice is overlooked today, and we do tend to keep it in the refrigerator. I have a five-star deep freezer wherein we keep food for many weeks and in the absence of cook, we eat the frozen food lest we starve of hunger. We just heat the contents in the microwave and thus eat our meals. This practice is acceptable occasionally but is not at all a healthy option for us.

Proper cooking of food has a much bigger impact in our Northeastern India. In Northeast India, smoked meat is very commonly consumed. Smoked meat is not bad unless it is properly smoked and properly preserved. There are places in the West where smoked meat is very commonly consumed and thus the smoked meat will have no problems in those countries. Unlike the Western countries, in India especially in North Eastern India, you will find that in every kitchen, meat is seen hanging from the roof right on top of the “Chula”: a slow way of smoking the meat, which does not guarantee the condition of the meat and the quality of the same. This place suffers from a typical cancer which is behind the oral cavity, behind the nose in an area called nasopharynx. Nasopharyngeal cancer is unknown in the other parts of India, but it affects about 15 to 20 individuals out of every hundred thousand especially in the Northeastern India. This leads to a conclusion that it is a region-specific cancer related to the eating and cooking habits of people. The fact herein is the presence of a virus called Epstein Barr virus, which grows on ill preserved meat, and is the etiological agent or causative factor for nasopharyngeal cancer. This cancer is easily preventable as it is alluded to diet and dietary habits.

In addition to these causative factors of cancers, I would like to add more to diet and problems related to obesity. Let us take another problem which is the opposite of problems happening in our rural India. I don't think many people are starving in India. In fact, many people have lot more food than what they need as a bodily requirement. All of us, at least, I, eat because it is our regular time to eat. Hunger is a word present only in my dictionary. I wonder whether our children would ever know what the word “hunger” means because there is so much of food and yet majority of the mothers are complaining “mulga khaatach naahi” and the irony is that the child's physical appearance do not speak of hunger. It is so amazing that I am reminded of my childhood days when the usual problem was the sight of our mothers running after us with the glass of milk. My grandmother used to advise my mother, “Leave this, leave this on the table; let him go, let him understand what hunger is.” Basically, we are not allowing the child to understand the need for what we are offering him as food but then “mothers are mothers: is the

maxim which we oblige in a respected manner. Another aspect of our motherhood commonly seen in our country is that is our women are thin till 35-40 years of age but gradually with the progress of age, the mother gains weight by virtue of her nature and position in the household. There will be more intake of “ghee” and the consumption of the leftovers of the family. The end result is that this practice coupled with the sedentary lifestyle and the eating habits leads to the consumption of more calories. By the time the lady reaches 50 years, there is already a fair amount of weight gained by the homemaker due to menopause, causing changes in the physiology of the women, which is unavoidable and then by the time, 55 comes in, the body of the general women seems not to be in a very good condition, causing 19 different cancers which are attributable to obesity. Hence, I emphasize today on the urgent need to exercise as a daily practice. We badly need to do something which will allow a good breakfast, average lunch and no dinner with 40 minutes of exercise every day. Good eating habits and healthy lifestyle will take care of majority of the things.

Presently, the lifestyle and the infrastructure of cities is not healthy. My suggestion is to set up walking cities which have dedicated cycling tracks. At the same time, there is also the need to implement stringent rules regarding these tracks whereby vehicles should be debarred from plying on these tracks. Adding to the concept of walking cities; let us take the distance between Versova and Gateway of India through the coastal road, which is around 14 kilometres. If you were to take three travelators similar to the ones present in the airports: first travelator moving at five kilometres an hour, the next one at 10, the third one at 15 kilometres an hour. You assume that you are walking on the street at five kilometres an hour and you step onto the first one and you start walking at 5 kilometres an hour; next you step on to the next one, walk onto it so that you're walking at 10 kilometres an hour, step on to the next one and you are walking at 20 kilometres an hour from Versova to Gateway of India. Through this means of transport, you will reach your destination in 40 minutes of walk, with fresh breaths of air by the sea. Imagine if the whole city uses this kind of transportation, we would be much healthier. I did suggest this form of healthy commutation to the our Chief Minister with a comprehensive plan of a Coastal Road- a double decker road wherein the lower section of the road can have these escalators, three going in one direction, three coming back, moving from Gateway of India to Varsova. Today we take about two and a half hours sitting at one place in a vehicle, polluting the air around the whole area with traffic congestion lest we congest our throats. We need some better thinking here and the call of the hour is to revamp the city to provide a healthier lifestyle to our citizens.

It is good to know about the factors leading to this disease, as we keep on pressing the fact that early detection is best for cancer and I need to shoot that myth down. The reason is that when you start screening, you will find more minute aspects of the disease because

we screen with greater and greater precision. It is quite like a CCTV at a signal, wherein you will look for different levels of flouting the rules-cars that cross the white line, cars that go beyond the white line, cars that park on the zebra crossing etc. But the question is-are you really looking for these individuals? You are not looking for these individuals; you are looking for somebody who will break the signal, knock somebody down and go, right? So to apply this analogy and I look at cancer, I will look for a killer cancer and if I will be able to conquer the killer cancer by early detection and strong evidence, is the question and the ultimate truth.

If I were to start screening, the numbers of cancer cases will increase, which is not a problem if I look at my larger than life vision of saving human lives. For lung cancer, we have lung cancer screening, for prostate cancer, we have the screening for the same which prevents cancers by early detection of the cancer cells. Hence, you cannot underestimate this phenomenal screening machine which helps us very greatly and you cannot keep on saying that the help is outside the human body. The helping hand is inside and is embedded in the body. It is quite like the instance when you realize that being a criminal, the police is not outside us but this police is present within us. Similarly, the cancer cells are present everywhere in the body. If I were to look at prostate biopsies in all individuals, nearly in the age of 60 years, somewhere close to about 70 percent of people will have some positive diagnosis. Is that the number that we get? No, we get only nine out of hundred thousand. Nine out of hundred thousand versus some sixty or seventy percent out of 100. Those numbers are phenomenal. The body has capability to contain and to keep cancers even if they are small and microscopic.

The ultimate precept of all the myriad numbers is to understand ourselves which is the order of life. We need to have that positivism within, to see that the cancers are kept at bay or if not, they are just a small kind of fleeting thought that has come in mind. When I compare the stream of thoughts to the metal detector at the airport; and if it were to detect either past or present corrupt thoughts in human mind, the question lies whether we would be able to walk through the detector free of any follies or foibles of life? I move on from public education to specific education which is required for cancer. The education system should primarily teach-the annals of what is known to us. Teaching the known philosophies doesn't does not mean that we have conquered every discipline or domain. So, this leads to the second part of teaching which should be to understand the methods of learning to unravel and tame the unknown and fathom the hidden frontiers of life, which is vital for us lest we remain the same as we were in year 1960, 2000, or 2060. We need to understand the precincts of what makes us think differently, as we tread this path to the unknown in our conquest of the war against cancer.

To apprise all about the various known courses in our search of the known frontiers, like

MCHS in surgery, DM for medical oncology, MD in ancillary branches like radial therapy, radiology and many more were existent for years. Nonetheless, there is a dearth of individuals in pursuance of the same. Hence, we garnered the perspective of doctors and took inputs from patients to understand what the gaps are. The doctors expressed factors attributing to these gaps like about the paucity of time, about infrastructure for research and so on. To mitigate this gap, we started a course an MSC in clinical research, the first course in India wherein we take in about 100 individuals every year with a job guaranteed the very next year before they leave our Institute. The postgraduates of this course are supporting research through industry & through individual centres positioned at different places. Similarly, nursing and training courses are required and there are various other courses that are important from the point of view of training. Take the instance of somebody who came to your house to draw blood from your veins. Now this gentleman is a specialist known as a phlebotomist. What is his qualification? He knows how to see the vein, how to look at the vein, feel the vein, puncture it, and draw blood.

Hence, the very essence of training is based on a reductionist model wherein the whole thing is reduced to something very minute, that is taught because there is excellence involved in this process of reducing the larger amounts to smaller amounts, leading to better outcomes. One of the examples, when I was in Taiwan, I witnessed 20 theatres running for plastic surgery where we found that there was a small room with around five girls of 10 to 15 years of age. These girls were none other than assistants of the surgeons who had extremely steady hands, who were trained to suit your vessels under microscope. Consequently, the plastic surgeon prepares the whole vessel, which is kept under the microscope and usually plastic surgeon takes about 45 minutes to suture that vessel, which these girls do it in 10 minutes as the patency rate of the girls is far superior to somebody who is of 45 years of age. So, this example shows how you have identified a focused area and thereby explore it for training and obviously it becomes a good source of an specialized occupation.

Another survey was done to research on our patients who have received the best evidence-based care, the top range of care, which is globally standardized with respect to the kind of delivery that is the machines provide, the excellent infrastructure with absolutely no problems. We ran this survey to understand the gaps, we found that the gaps were enormous, and the dropout rates were enormous. To mitigate these gaps, we needed a workforce, a team of doctors, who can be looked upon as family members of the patient ready to take up the problems of patients with the doctors. The individual who helped the patient can be named as Kevat. Kevat is a chap who took Prabhu Ram from one end of Sharayu River to the other bank. The story goes like this, that at the end of reaching the other end, he offered his ring to him telling him that he did such a good job and he said that individuals with the same profession don't charge each other. So, he asked how both the

professions are same? He answered the question by saying that the way he had taken Shri Ram from one end of the river to the other end without letting any tempest affect Shri Ram, so does Shri Ram for the entire universe as a saviour of their lives. Thus was the origin of term, Kewat, who is a saviour for the patients in such turbulent time. This effort will allow the afflicted patients to pass through this stage as if the cancer disease is nothing but a small blip in their life and the life again re-surges back to normal.

Coming to the courses, we can see a huge number of other certificate courses that we run but suffice to say that on an average at any given time, about 1000 students of various categories pursue the same courses in a duration of around six months to about four years, under our tutelage, and the result is that they become future ready, prepared to take on life. I must confess, unlike any other course, what you learn in medicine, is 100% applicable in day-to-day life. If one fails to apply 100% of the concepts, there will be difficulty in treating the patients. Hence, study of medicine is about the need to identify and focus on some important domains and at the same time not to lose the bigger picture of life. If we get down and down vertically in search of the hidden truths, it shouldn't so happen that our horizontal understanding at the surface is lost. In the pursuit of the individual diseases, if you were to break it down into smaller and smaller areas, we should not miss out that there is a forest in front of us and that has its own problems which need to be sorted out, the forest of human kind.

Coming to our graduation ceremony of the graduates of the Medical degree at Tata Hospital, I will stop at one nostalgic remedy which will take you back to the very important aspect of the public education. I recollect my grandmother who used to make me recite at bedtime and which I thought was an excellent public health exercise. She used to make me recite every time before going to bed that: at 10 years, we should stop holding finger of our mothers, as we need to be independent. At 20 years, one should stop playing with toys. At 30 years we should stop looking around. At 40 years, we should stop dinner as we need to reduce the intake of food. At 50, I have a certain loss of what is 50, in spite of reciting it for so many times. At 60, nothing new to be done and you should continue with whatever you are doing. At 70, stop having sour food because the arthritic changes are more affected. At 80, start sleeping on harder beds. At 90, stop having zest for life and at 100, stop your life. Thank you very much.

I am sure I am not the most loved person right now to have taken you away from Dr Rajendra. Thank you, Sir, I am sure all of us feel a lot better about being Indians and the kind of food which we eat. I am still, trying to ascertain whether it is a good thing to be a foodie or not. With that, I would now like to request Shri. Vishwas Deshpande, our managing trustee of Vidyalandkar Dnyanapeeth Trust to felicitate Dr. Badwe and I think I speak for everybody very well deserved.



Vote of Thanks

Dr. Rohini Kelkar

Principal, Vidyalankar School of Information Technology

Honorable Chief Guest, Dr. Rajendra Badwe, respected Dr. Gupchup Sir, our most valued invitees, ladies and gentlemen, on behalf of Vidyalankar group of educational institutes it is my privilege to purport vote of thanks on the occasion of the fifth Professor C. S. Deshpande Memorial lecture.

The word cancer is very scary for a common person but today, we got to know that the positivity within is essential to get us out of that fear and many organizations are working towards assisting the cancer patients and their families. Tata Memorial centre is playing a remarkable role in setting and evolving the processes for the conquest of cancer and Dr. Badwe is a very significant contributor for this task. We are extremely fortunate to have him here on our campus today to deliver fifth Memorial lecture in the memory of our founder, Professor C. S. Deshpande. In spite of his busy schedule, he accepted our invitation and enlightened us on our role towards the quest of cancer. On behalf of the team Vidyalankar, I thank you Sir for your valuable insights.

Our thanks are due to our Mentor Dr. Gupchup Sir who has been guiding us right from the inception, planning, and execution of Professor C. S. D. Memorial lecture. I especially thanks Sir for the opening address for today's gathering.

I am also thankful to our special invitees which includes the friends and family members of Professor C. S. Deshpande, the members of statutory bodies of all the three colleges on Vidyalankar campus, professors, and officials of prestigious institutions in Mumbai. My thanks are also due to the students and the research scholars of medical, non-medical colleges and universities in Mumbai. Last but not the least, I am thankful to the entire Vidyalankar team headed by our chairperson Rashmi madam, Secretary, Avinash Sir, our Managing trustees, Vishwas sir and Namrata madam, entire teaching and non-teaching staff who have put their best efforts towards organizing this program. I thank you all.



About Prof. C. S. Deshpande (1932-2005)

Endowed with a good academic career, C. S. Deshpande stood FIRST at the Inter Science Exam winning all the University prizes. Then after completing B.E. (Electronics and Telecom.) from the College of Engineering, Pune, he joined the prestigious T.I.F.R. He appeared at the I.E.S. (Indian Engineering Services) Examination and again stood FIRST in this All India examination.

He discovered his intrinsic interest was in the field of teaching and writing Mathematics and in Mathematical Engineering Subjects. This pursuit of his passion and an urge of dedicating himself to sincere academic pursuit led him to establish Vidyalkar. His basic objective was to guide eager young students. He worked at it with a missionary zeal to enhance their worthiness and imbibe nobler values of life in their receptive minds not through empty words alone but through his own example.



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