

## Editorial

# Uncommon Wisdom in Medicine

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*"For I have learned to look on nature, not as in the hour of thoughtless youth, but hearing oftentimes the still, sad music of humanity."*

William Wordsworth, 1770-1850

Modern medical science is said to be highly scientific and is believed to be the best panacea for those hapless people who are ill at any given point in time. With all this claptrap, the reality baffles me daily. This morning I had to contend with the death of a dear friend, who saw me, a couple of months ago with what appeared at that time to be an early carcinoma of the pancreas. Although I am not an oncologist, I felt that he had a very bad prognosis with or without conventional treatment. He did go for all the three-pronged attack on his pancreas - surgery, radiation and chemotherapy. His dead body was delivered yesterday after a huge bill from a five star hospital in Mumbai, India! I shall reproduce a letter *in toto* hereunder from a patient of mine whom I advised against angioplasty ten years ago for a simple stable angina at the age of 76 years! He is doing all that he wants to do even now.

"I met a person who lives in our apartment, who has gone for angioplasty about five or six times! She is on twenty-one tablets! Thanks to your guidance I am in good health!"

Linus Aloysius.

I get enquiries from senior doctors about their problems with statins almost daily. To cap it, I saw the recent documentary by Michael Moore "SICKO" that gives the graphic details of the deplorable state of the medical care system in the US. The medical scenario in the US ranks 37<sup>th</sup> in the WHO list with Cuba at 39<sup>th</sup> rank. The US was last but one in the

14 industrialized countries' study with Japan as the best and Germany the worst! I think it is time we took stock of our foundation lest we should be caught on the wrong foot by society, if we drift along these lines in the years ahead. I have drawn liberally for this editorial from one of my letters to the editor in the British Medical Journal.

When one enters the medical college, the first thing that one is made to learn is to forget one's common sense<sup>[1]</sup>. This probably happens much earlier in the present educational system; even as early as one enters the primary school. In the practice of bedside medicine, however, common sense is not just common but it is commoner than what one thinks it is. The statistical science of medicine can, at best, manage to size up cohorts of people but never the individual patient on the bed<sup>[2]</sup>! It is the past experience of the doctor with his clinical acumen that helps him at that point in time. He has to take a spot decision one way or the other based on his own assessment. None of the entry criteria of the "so called" research studies helps one at that time, as no two individuals are alike in real life. Unfortunately, that is what is presumed in the science of medicine.

The art of medicine is the one that makes the patient's day. No amount of science and technology will ever be able to replace that humane human being, the doctor that alone could put to rest the universal anxiety that is part of all illnesses since every disease presents through the personality of the patient. Every doctor should become a healer with a heart full of compassion for the ill. The role of the science of medicine is only to sharpen the intellect of the doctor on the bedside. How good is good medical science? While the science of medicine is only a statistical science, and not an absolute science like mathematics, one needs to be

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careful in accepting all that is sold these days as scientific medicine<sup>[2]</sup>. In reality even mathematics becomes shaky. In so far as mathematics is certain it is far removed from reality and when it is closer to reality it is not certain<sup>[3]</sup>! Medical science has one more drawback.

Science, in reality, is simply making models, mathematical constructs, which with verbal jargon, are supposed to work! So far so good. When such a science is applied to a dynamic human being that is being continuously run with food and oxygen, the linear laws do not seem to work. Human body is not only non-linear, it follows the holistic rules of the universe. Human beings are heavily dependent on their environment, in addition. All these make the present medical science a square plug in a round hole<sup>[4]</sup>. Change is progress and if we want to progress in medical science, we have to think deeply of changing our mindset and follow the new science of chaos-of non-linearity and holism. Change is not easy, though. Human beings are basically status quoists wanting the comfort of the existing order. We are usually afraid of change and what it might bring in its wake. However, life itself is ceaseless change until death. Hence, there is a need for serious thinking here. Let me think with you, the reader.

Let us examine the science of the very foundation of medicine, sold as the gold standard in medical research, the randomized controlled trials (RCTs). The British claim that it was Archie Cochrane that introduced the term and they claim that the first such study was undertaken by their Medical Research Council in 1940 on the role of streptomycin in tuberculosis and on the role of the whooping cough vaccine. However, there was a very good RCT done in Germany by Roethlisberger and Dixon in 1939 on the role of streptomycin in tuberculosis. There are indications that similar RCTs were conducted by R A Fisher in 1926 in agricultural sciences<sup>[5]</sup>.

Let us examine the definition of RCTs. *"A carefully and ethically designed experiment which includes the provision of **adequate and appropriate** controls by a process of randomization so that precisely framed questions can be answered."* RCTs did a good job in the arena of infectious diseases where the results could be got at the end of the study despite the study's inbuilt drawbacks. However, in our enthusiasm, we have extrapolated those designs for the study of treatment of risk factors like "raised BP, cholesterol and sugar in the apparently healthy section of the population where the results are not seen at the end of five years study anyway. Then we use the statistical power to predict the future with our results of the RCTs. Here is the problem.

When one has a control population, the same must be identical to the study cohort for the

results to be reliable. No two human beings are identical anyway. To cap it, we can only measure a few phenotypic features of both the groups for comparison. These, by any stretch of imagination, could not be taken to match the two groups. Despite this, the RCTs could do a good job in infectious diseases where the results are there to see at the end of the study. Time evolution in the human system being non-linear and solely dependent on all the parameters of the initial state, the mind and the genes included, RCTs could only deliver doubtful answers to the questions posed at the beginning. If we compare this with the definition given above, it becomes clear that all is not well in this field. That would shake the whole edifice of medical science as the foundation is built only with dry sand. How does randomization compensate for our lack of knowledge of the whole of the initial state of the human organism in the study is something that has no answer<sup>[6]</sup>.

Be that as it may, modern medicine could, at best, reach only a minority in this world. Large sections of the population live without the benefit of modern medicine. They also fall sick and they have their own remedies that have not gone through the "rigors" of the RCTs. We must not close our eyes to the possibility that there could be authentic methods in other systems as well that might help us unravel the mystery. Our ostrich like attitude denies the ardent student in the medical school even a remote chance to think about it. One could argue that only modern medicine is scientific and the rest is mumbo-jumbo. Then modern medicine's audit should show that. The Institute of Medicine audit in the US has shown medical interventions in bad light<sup>[7]</sup>. The per capita death rate of the grievously injured in the Vietnam War, where hi-tech modern medicine was at hand in Saigon, was slightly worse than the results of Falkland's War, where the British did not have those facilities close at hand! Cancer audits before and after modern medicine do not show much to write home about, either! Cancer therapy, bypass surgeries, angioplasties, stem cell transplants, genetic engineering, treatment of chronic illnesses, terminal care in the intensive therapy units and, even, assisted delivery in high risk pregnancies do not seem to set the River Ganges on fire<sup>[8]</sup>.

The best of these is the pioneering studies from Prof. David Eddy of Stanford University, a cardiac surgeon turned mathematician, who, with his ten years of painstaking research, has invented a new software tool that has thousands of differential equations to test the efficacy of what we do in medical science arena in a virtual field, named ARCHIMEDES. His studies have belied most, if not all, of our RCT conclusions (david.eddy@archim

edesmodel.com). This has opened up a new vista for others to follow. Our own studies for the last quarter of a century of the non-linear functioning of the heart using Heart Rate Variability (HRV) have thrown up newer possibilities for diagnosing and prognosticating heart diseases<sup>[9]</sup>. We have been working on the non-linear wavelet analysis of the conventional ECG using the Continuous Wavelet Transform patterns. The Whole Person Healing Group, a collection of humane scientists lead by Prof. Rustom Roy, the father of nano-technology, a distinguished professor at the Penn State University, based in Washington DC, is doing phenomenal work in authenticating alternate methods in the arena of healing sciences<sup>[10]</sup>.

The linear thinking in medical sciences with the reductionist attitude does not seem to support the belief that modern medical research is perfect. Far from it, very far. Time has come to think of good alternatives for which there is no dearth. We only have to change our attitude to those methods and we could always use our modern scientific methods to evaluate their efficacy and then accept or reject rather than prejudging their capacity. In my long experience, it is the young student in the medical school, given the freedom to think, that would come up with exciting new possibilities. In my considered opinion, teaching is a more effective way of learning and our students are our best stimulators provided, both of us remain humble and open to correction. Many effective systems of health care have been in existence for "times out of mind" in this world long before the "so called" scientific medicine came on the scene<sup>[11]</sup>. It is high time that thinkers among the medical leaders, a rare breed indeed, start to look at the alternatives critically for the common good.

We have the power to verify their claims and then choose the wheat from the chaff. Efforts are on to do just that and we hope to let the world know that there are alternatives, which could complement the good things in modern medicine. One good example in modern medicine is emergency care, which cannot be replaced by any of the existing

alternatives. That said, I must add that even in that area, much needs to be refined, as many of our interventions seem to be counter productive there. That is for another occasion. This paper does not permit me to go into that area. However, the majority of minor illness syndromes that form the bulk of illnesses on a given day, and the chronic ailments and cancer need some new approach in place of the top-heavy reductionist modern system. We need a holistic system of medical care which also takes into consideration the human mind as the initiator and healer of most illnesses<sup>[12]</sup>. Let us move from the linear reductionist curative science to the holistic non-linear healing science.

*"A fool thinks himself to be wise, but a wise man knows himself to be a fool"*

William Shakespeare, 1564-1616

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