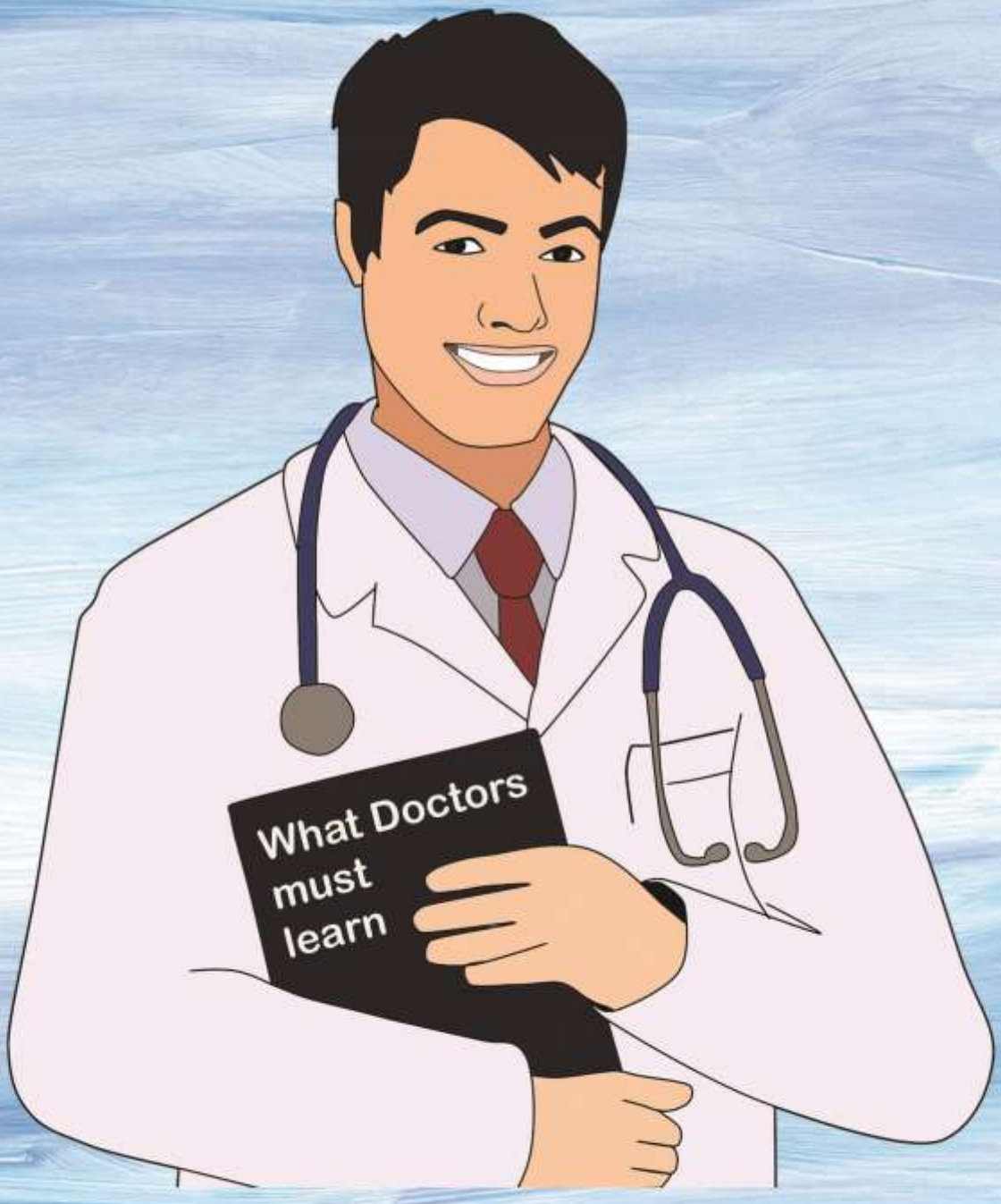
What Doctors Must Learn
Volume 1

Doctor, look beyond science



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Preface

It is said that change is the only constant. I joined medical college more than six decades ago and I have noticed a sea-change in the science of medicine, medical teaching, and medical practice. The science of medicine has advanced so much that it is impossible to keep pace with it and no doctor can claim to know everything. It has paved the way to specialization and further, super-specialization. Technological advances helped in the diagnosis and management of many diseases. With such an advance, one would have expected a "cure" for many diseases resulting in satisfied patients and a healthier population. Has it happened?

In the past, when science had not yet developed, doctors **cared though could not often cure**, they showed empathy and concern for the patient, were responsible, accountable, transparent. They followed moral principles, true to Hippocratic oath and enhanced the image of the profession. Patients had faith in the doctors, respected doctors and were grateful to them, irrespective of the outcome.

The advancing science and technology was so attractive that medical practice became "high-tech" and soon traditional "high-touch" gave way to "no-touch". Humanity was blunted. Patients don't care to know how much doctors know but they want to know how much doctors care. They expect

communication, counseling and time from doctors to answer their questions. Unfortunately, the traditional art of practice is lost in advancing science. While science is dynamic with frequent changes and uncertainties, the traditional art of practice has stood the test of time for generations. **Doctors must look beyond science** and it is the need of the hour to serve the community better and salvage the image of the noble profession. It is possible only if medicine is humanized.

Chapter 1. Is medicine a science or art?

Medicine is where science marries art – Aldous Huxley
Medicine is a science of experience – Samuel Hahnemann

Introduction

The medical mission –the calling of a doctor – is to feel connected with the purpose and value of the medical profession that is well represented by offering holistic care. A holistic approach needs the use of all faculties endowed by nature to all of us and they are body, heart, mind and soul. When translated into medical practice, the body refers to knowledge (**science**) while the heart as compassion, mind as commitment and soul as own conscience are all parts of **art**. Medicalscience without art remains short of a desired expected care.

Is Medicine a science?

Science is an intelligent activity encompassed with a systematically organized study based on evidence to acquire knowledge capable of accurate prediction. Science is not the

absolute truth but the search for the truth that may often elude us. Unlike physics or mathematics, medicine is a science of uncertainty and so at best considered to be a scientific study. Medical science is dynamic and ever-changing and its half-life of observed facts is short. Hence, we need to learn, unlearn and relearn all the time. The belief that medicine as science is further enhanced by development of "evidence-based" medicine. However, there are limitations even of double-blind randomized control trials (RCTs) and lack of evidence is not necessarily an absence of evidence. Moreover, evidence also has several grades and is often diverse in views. Consensus guidelines are at the best a summary of practical wisdom and not the evidence. Thus, there is a need for experience as well. In fact, evidence and experience are two sides of the same coin. Evidence and consensus guidelines are based on generalisation while an experience fine-tunes to suit the individual patient thus overcoming grey areas of science. Of course, bias and prejudice are inherent with experience and one must have an open mind and honesty to accept when wrong.

Uncertainties in spite of medical advances

There have been great strides in medicine helped by technological advances but most inventions that are supposed to result in cure still fall short of the desired, In fact, management of most diseases can be categorized into 3 P's – placebo, palliative and plumbing. It is not only the uncertainty in the diagnosis of a disease because of the wide variation in presentation but also in its predictable outcome. This is because the **outcome of a disease depends on body,**

mind and genes and hence the study of the body alone cannot predict the outcome. Genuine **“cure”** is rare but **care** is always possible. Medical practice based on science alone often fails because it cannot deliver “care”. Bacterial infections and a few other infections can be cured but even then,the final outcome is not guaranteed for various reasons such as antibiotic resistance, host immune responses and genetic predisposition. Modern advances have improved our understanding, but a cure is still elusive in most diseases, besides the issues of accessibility and affordability. The present motto in medicine is thus **“cure, if possible, but care always”** and this is where the art of medical practice comes in to play a major role.

Medical practice an art basedscientific study

Art involves skills developed by experience and observation in the application of science. The art of medicine has remained the same over generations and is the foundation of medical practice. It is permanent and evolved through centuries based on human values and intuition. Its thrust is to allay anxiety in the minds of patients. If you have human qualities of head and heart, they encourage the healing power of a patient. Healing of the damage is done by the human immune system, the stimulation for which comes from the mind of a sick person which in turn depends on the patient’s confidence and faith in his doctor. It is an art of caring and comfort. There has to be an ideal art-science ratio though the pendulum has swung too far towards science ignoring art and hence a disaster. Early on, medical practice

was art like other arts such as poetry and painting, practiced with love and passion. However, today it is based on science aloneignoring the art of medicine.

Must integrate art into the science of practice

Basic components of the art of medical practice include skilled planning, time management, communication and counseling. Besides, philosophy (patient hearing and offering honest opinion), ethics (do not harm, do good, privacy and justice) and culture (courteous behavior and empathy) form important constituents of the art of practice. Science treats the body, art comforts the mind and soul. One without the other is incomplete. Medicine and meditation both mean healing and intended to offer “care” definitely, “cure” if possible.

Emotional side of medicine

Beyond every illness is a human being. Sir William Osler said “it is most important to know what sort of a patient has the disease rather than what kind of disease the patient has” It represents a simple definition of empathy. Empathy is rooted in humility and in being humble and humane. Empathy is not an emotion but cognition, it means recognizing the suffering of others and it is a prerequisite to compassion. It is compassion that generates the desire to help others. The secret of “care” of a patient lies in caring for the patient and it needs a human connection that helps to heal. It is as important as medical science and physicians’ competence. Especially, it comes to doctor’s rescue in case of poor outcome, complications or medical error. Empathy is the

most under-appreciated human skill. It is present in every individual but further boosted by learning from role models. In medical practice, listening is the first step towards empathy. Detailed history-taking sets the tone for communication. Appropriate physical contact during physical examination boosts emotional connection. Counseling denotes compassion and generates faith. Physician must simply follow the art and offer help to patients without judgment.

Holistic approach

Humans are endowed upon by nature with multiple qualities which include body, heart,mind and soul. When applied to medical practice, body means knowledge, heart the compassion, mind the commitment and soul our inner conscience. Knowledge is important and as medicine is dynamic and ever-changing science, we must keep up-to-date. But knowledge alone cannot deliver “care”. We need to commit to do the best for every patient with compassion. And finally, we are responsible to our own inner conscience. We must use brain and heart together – heart is referred to as “little brain” – it is innervated with large number of neurons. We must be honest, transparent, responsible and accountable. Thus, when every patient is treated in a holistic way with devotion (selfless dedication), it results in divine healing. It is easy to understand that healing is a natural process,mainly supported by the art of medical practice with rational use of science. Science alone fails.

Beyond art of humanities

The art of medical practice also involves the art of clinical medicine. Analysis of detailed history should be based on “thought in action” which means each question has a specific purpose of inquiry and answer to which should lead to the next question. History should give a clue to probable differential diagnosis in most cases and this should be followed up with focused physical examination that should be thorough and carried out the standard systematic way. The physician must learn to listen and not just hear, must observe and not just see and think not just collect information. Probable diagnosis must be based on Stutton’s law to follow what is most common.(When Mr Stutton - a bank robber was asked by the judge why he tried to rob the bank, Mr Stutton said that is because it is most common to find a large amount of money in the bank) Only after ruling out common conditions, one can think of an uncommon presentation of common problems and finally consider uncommon and rare problems, in that order. The patient is not an inanimate object that can be analysed by technology and computers. Telemedicine has its own limitations though useful in providing access to medical facilities in remote areas. Patients expect physical contact besides time and conversation with the doctor. It is a rational approach to medical practice and constitutes an important part of the art of medicine.

Past and present

A few decades ago, before modern science developed, physicians offered personal attention with compassion and

concern for the patient that gave comfort if not cure. Recent medical practice has thrust health care into an era of modernisation with technological advances and computerisation that allows physicians to access everything at a fingertip. However, there is indisputable depersonalization of patient care. In this fast-growing modern medicine, physicians treat diseases ignoring a human being in whose body, disease resides but now, what is being treated is not the disease but test reports and numbers instead of a patient. This has resulted in patient dissatisfaction and disturbed patient-doctor relationships with its dire consequences including increasing cost of health care.

Motivation necessary to reverse this trend

Motivation is a psychological driving force that reinforces an action towards the desired goal. Intrinsic motivation should come from within, driven by enjoyment of work and pleasure without expecting a reward. Once intrinsic motivation gets started, habit sustains it. External motivation depends on reward/money or punishment/threat, it has a negative impact on life. Motivation determines what you do and attitude decides how well you do. Time management is the key along with communication, counseling and documentation. You must do to your patient what you would expect from your doctor if you were a patient. Mahatma Gandhi said, “recall the face of the poorest and weakest and ask yourself whether step that you are contemplating to take

would help him". If you apply this test, pride will be replaced by humility and dismay.

Personal notes

During my entire medical education and especially during post-graduate tenure, I was lucky to be exposed to the art of medicine from my teachers, besides learning the science of medicine from them. Though art was not taught in the curriculum, repeated exposure made a permanent impact. That was the time when I realized the art of medicine was as important as science or maybe even more relevant when science fell short of desired. I am aware that patients and parents of sick children facing serious or prolonged illness harbor fear, anxiety, frustration, often self-pity or self-blame that also should be addressed by talking to them with empathy. Many times, I would spend more time talking to parents of sick children as compared to time spent over history taking and physical examination. I recall many instances when parents would express their gratitude just because I showed empathy and answered all their queries to their satisfaction. It also made me very happy. Once I was asked by a pediatrician couple to see their child who had a fever for more than a month without a diagnosis. I spent an hour discussing with them the probable diagnosis andmanagement plan and they were satisfied and happy. Two weeks later, as the child was better, they came to thank me.Knowing that they see the large number of patients each day giving verylittle time to patients, I asked them whether their patients were satisfied. I was surprised when they said

they were. I told them that their patients were not aware how much you owed them but you definitely knew it. And so, I suggested they change. But old habits die hard!

Take home message

We should not allow medical science to blunt humanity, ignore ethics and the need for empathy. High-tech medicine can do wonders only to a few but **high-touch** medicine can comfort all. Don't forget, doctors are criticized and manhandled due to lack of art of practice and not because of poor knowledge of science.

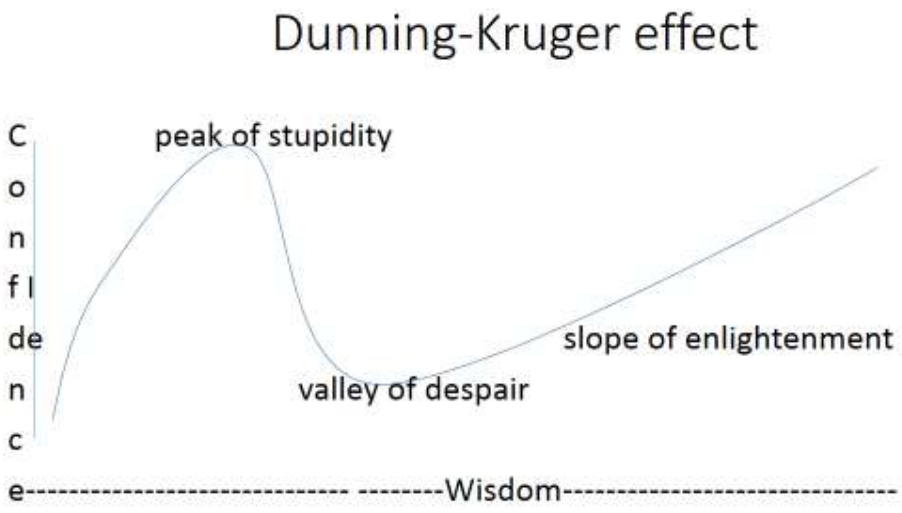
Chapter 2. Uncertainties in medicine in spite of advances

Medicine is a science of uncertainty and art of probability – William OslerMust devote part of your mind to constantly processing uncertainty – Scott Belsky

Introduction

Medicine unlike physics or mathematics is at best a scientific study rather than pure science. There have been rapid advances in medicine with the use of modern technology. However, as our understanding improves, it unfolds our increasing ignorance. "The more I learn, the more I realise how much I don't know," said Albert Einstein. Most of us experience Dunning-Kruger effect that describes a hypothetical cognitive bias stating that people at a task overestimate their ability and confidence. The wisdom curve attains quickly a peak of stupidity followed by valley of

despair and then over time, the slope slowly moves upwards towards enlightenment.



Over last few decades, so called advances in each decade have partly become obsolete by the next decade, exposing our stupidity and resulting despair. Hopefully, this leads to the beginning of enlightenment though the progress is very slow that takes life time to realize what is right. Thus, uncertainty continues in medicine in spite of advances.

Disease manifestation result of a tripartite interaction

Presentation of a disease and its outcome depend on multiple variables and may not follow the standard pattern. Interplay of three major factors is involved in the manifestations of the disease and they include a primary triggering agent, a host and an environment. **Trigger**may exist in many different forms such as physical,chemical insult (poison, toxin or abnormal metabolite), infection being the most common besides many unknown forms. Detection of

primary agent has been increasingly possible with modern technological advances but for various reasons (technological limitations and human irrationality), proof of a primary agent often remains elusive. Even if primary agent is detected, its characteristics are difficult to assess. For example, when infecting organism is detected, its severity or virulence is not known and so also in-vitro antibiotic sensitivity may not be the same as in-vivo efficacy. These are some of the technological limitations. Same is true about other primary triggering agents.

Host factors play an important role in manifestations of diseases. Nutritional and immune status of the host can be evaluated to a certain extent but it may not translate into a predictable pattern or outcome in a disease. This is because even an immune-competent host may underperform to a specific challenge or overreact to a primary agent with its consequences (immuno-reactive disorders with organ damage, MIS - multisystem inflammatory syndrome). Science fails to preempt such possible immune aberrations and even after they occur, the cause of such reactions is a conjecture. Genetic predisposition is important but epigenetic factors decide the outcome. The role played by the "mind" in host response remains unclear. It is an irony that medical science has ignored the role of the mind in the causation of physical diseases though there is an attempt to correlate it with psychological problems. However, anatomy, physiology and pathology of the mind remain elusive but we know that communication and counseling with empathy do help "mind" of the patient with resultant healing. The **environment**also

modifies disease manifestations. (Malaria in the hyperendemic zone may present without fever).Exposure to factors such as population density (overcrowding), state of general hygiene and seasonal variation may alter disease manifestations. Effect of drugs depend on pharmacodynamic and pharmacokinetic factors and vary with time of the day or night (circadian rhythm – steroids safe as a single dose in the morning), drug ingestion either on an empty or full stomach as well as the interaction between multiple drugsdiffer in their benefits as well as side effects. Such variables add to the complexity of medicine.

The host decides the pathology and hence the outcome

Hosts of the same age with normal nutritional and immune status respond to the same infection with such a marked variation that no modern technology can predict. This is how it is mainly the individual host who decides the pathology (type of response) and its outcome that is unpredictable. Streptococcal pharyngitis is a classic example. There occurs a wide spectrum of host responses to streptococcal infection that may lead to markedly variable outcomes such as asymptomatic infection without disease, mild vague symptoms, standard presentation with cure with or without antibiotic, asymptomatic carrier state, recurrent disease, immune complications after curing of disease like rheumatic fever with its different manifestations, glomerulonephritis, PANDAS (neuro-psychiatric disorder) and also serious streptococcal skin-scalded syndrome or toxin-induced manifestations. All these patients look similar to begin with

but they progress unpredictably in a different way. Modern science fails to preempt a specific pattern of response in a given individual and knows only after it occurs. Even then, treatment is not always helpful as management of immune complications is palliative and not curative and favorable outcomes cannot be guaranteed.

Tuberculosis is another example. Immune response to mycobacterial infection is T cell-dependent and it is the balance between hypersensitivity and immunity – two sides of host immune response. Depending on such a balance, manifestations vary from favorable response such as primary asymptomatic infection (requiring no treatment) to treatable pathology with good outcomes such as primary complex, progressive primary disease and pleural effusion, treatable pathology but with permanent damage such as chronic fibrocaceous cavitary disease and disseminated diseases such as military or meningitis. With such a different pathology, the outcome also varies from cure with or without permanent damage or even fatality. As mentioned earlier, drug-resistant tuberculosis is a challenge resulting from human irrationality (misuse by doctors and non-compliance by patients).

It is clear that unpredictable response and outcome are a possibility in every disease. This is the reason that every disease may present with atypical or incomplete manifestations that pose a clinical challenge and the outcome is not certain in spite of early correct diagnosis and prompt compliant treatment.

Cause and effect is often a conjecture

Even when a cause of a disease is detected, one may not be sure whether the effect is related to the same. For example, isolation of a bacterium in a sample may not be the cause but simply a commensal or a contaminant. Similarly, in-vitro and in-vivo drug sensitivity may differ and the patient's response to a drug may not correlate with the test result. The normal test result does not necessarily rule out the disease as much as an abnormal test result in isolation is not the proof of a disease. Science does not know cause and effect in relation to congenital malformations Though few risk factors are considered but it is not rare to find no risk factors to explain such problems and on the other hand, one does see an absence of any malformation in spite ofthe presence of risk factors. It is clear that we are still short of complete answers in spite of advances. There is no doubt that research should and will continue to find more answers but I fear our understanding will always lag behind in this race and this is how uncertainties will remain. That is how medical practice is based also on the art of probability.

Controversies due to uncertainties add confusion

The recent pandemic of coronavirus is a classic example. It has left many unanswered questions and "experts" differ adding confusion. We are not sure about the origin of the pandemic. It took time for WHO to declare a pandemic. No government was sure of immediate action though most countries announced lockdown, few did not. No one was sure when to release restrictions. Several countries including India have faced multiple "waves". A balance between

probable morbidity/mortality and economic losses were difficult to predict and there were controversies on every decision. List of symptoms arising from covid infection kept on increasing to an extent that any symptom or even no symptom was considered possible to explain disease. There was confusion about different tests and their reliability besides affordability and accessibility. No test in medicine is 100%, afalse +ve and false - ve test results are inherent limitations. Treatment options were equally controversial with an initial favorable report about Hydroxychloroquine published in a reputable international journal that was soon confirmed to be wrong within the next few days. Several drugs have been tried with varying claims but not recommended and Remdesivirwas the only approved drug. Even then, no one was sure about for whom and when to use this drug. The use of steroids, IVIG, monoclonal antibodies and plasma therapy have been tried with unpredictable varying success and so there are no clear recommendations. Finally, it was felt that the only life-saving measures were steroids and adequate oxygenation. However, steroids did result in Mucormycosis in a few patients. Similar controversies exist in the choice of vaccines and also the interval between two doses. The initial4-week interval (based on the need to hurry through an immune response)was replaced by 6-8 weeks interval (for better immune response). Such uncertainties lead to confusion that is further promoted by different self-made experts. We are not sure whether present vaccines protect against various mutant strains. There is even a lobby against vaccination -imagine how

evidence is elusive and the consensus is debatable. But what is universally accepted is the old traditional wisdom –social distancing, masking and sanitisation.

Way forward in spite of uncertainties

Uncertainties in medicine are likely to be increasing as our knowledge improves with the unfolding of newer challenges. This is where experience and traditional wisdom come in along with scientific evidence. Experience is built over time with an open mind and willingness to accept mistakes and make necessary changes. Thus, we depend on consensus guidelines that at best represent a summary of the practical wisdom of experienced experts. Naturally, these guidelines need to be revised periodically as our knowledge (or ignorance) increases. It also underscores a fact that medical practitioners must continue to learn, unlearn and relearn forever.

Personal notes

I was more confident about the diagnosis of a disease and its outcome when I started to practice with little knowledge (ignorance is bliss). As I learned more, I developed a more cautious approach to being aware of a wide spectrum of presentations of a disease that may overlap with other possibilities. Similarly, I realized the outcome of correctly diagnosed and treated disease may not always progress in an expected pattern and hence there is always a need for constant monitoring. I have seen an unexpected recovery in a brain-damaged child and also met worst outcome even when disease was diagnosed early and treated in a best scientific

way. It made me clear that there are other factors hitherto unknown. Finally, I have realized that nature is so kind that most of our patients, but not all, improve in spite of uncertainties and we take the credit for the same. It should make us feel humbler not to take credit for success and be more watchful and try our best. I remember one of the pioneering cancer surgeons operated on a patient suffering from GI cancer and found an extensive spread that made him close the abdomen without any further resection and counseled relatives about the poor outcome. This happened in early 70s and to his and everyone's surprise, the patient recovered completely. The surgeon considered his diagnosis of cancer was wrong but would not believe that cancer got cured by nature or any other measures followed by the patient. Such instances do occur though as mentioned before they are rare but make us aware of medical uncertainties. Such instances also remind us to look beyond modern medicine to other systems of medicine.

During the pandemic, medical experts were asked whether it was time to ease the lockdown – allergists were in favor of scratching it, dermatologists advised not to make a rash move, GI specialists had a gut feeling, neurologists felt the government had a lot of nerve, obstetricians felt everyone was laboring under a micro-conception, ophthalmologists thought the idea was short-sighted, pathologists could not opine without a post-mortem, pediatricians said 'oh, grow up", psychiatrists thought the whole idea was madness, radiologists could see through it, anesthetists thought whole idea was gas, cardiologists did not have the heart to refute it,

in the end, proctologists won leaving the entire decision up to the asshole.

Take home message

There is no doubt about rapidly advancing modern medicine has opened many opportunities for better health care. However, there exist too many variables in the causation and outcome of every disease, many of such factors are not yet clearly understood. Such uncertainties in medicine require watchful monitoring and empathetic counseling without instilling undue fear in the mind of a patient but at the same time not giving false hopes. Physicians must understand the limitations of science but continue learning also from experiences based on deliberate observation.

Chapter 3. Changing trendsa challenge to the already trained

Is it not a bit unnerving what doctors call what they do is "practice"? – George Courtin It is astonishing with how little reading a doctor can practice but it is not astonishing how badly he does it – Dr S. Venkatesan

Introduction

Medical science is dynamic and fast-changing so much that some of the prevalent trends a decade ago become obsolete by the next decade. The problem is we don't know which part of the knowledge would change to be invalid and so we need to keep learning, unlearning and relearning. Time may not be too far when what you read today was accurate when

written, but may not be accurate when you read it today and what is used today may become obsolete tomorrow. However,the art of medical practice has been eternal over generations and so, once we learn the art of practice and perfect it, it is useful forever. With advancing modern science, art seems to be forgotten and this is a dangerous trend. It has resulted in patient dissatisfaction and led to loss of faith and image of the medical profession.

Changes in disease profile

Manifestation of a disease is a result of tripartite interaction between the host, environment and an offending agent. Over the last few decades, all three factors have shown changing trends. Changes in lifestyle have affected the nutritional and immune status of the host. Crowding, international travel, air pollution and many such factors have significantly contributed to changing trends in disease profiles. Offending agents, microbes, in particular, have been smarter than before and have successfully evaded host defense by mutation and acquiring drug resistance. Such changes have resulted in varied presentations of the same disease in different individuals and have been a challenge to the doctor. Unfortunately, neither of these three factors are easy to assess and hence evaluation of the interplay of these factors is getting more difficult. Standard presentation of the disease as described in a textbook is often not the way disease presents in actual life situations and such problems are a rule more than the exception. There are several such examples seen inday-to-day practice. Changes based

on host factors As malaria became endemic, it rarely presented as fever with rigors and may manifest with any type of fever including low-grade fever or at times even without fever. On the other hand, typhoid may present as fever with rigors. In fact, rigors represent a high rise in body temperature in a short time and would occur in any disease. Classical textbook presentation of tuberculosis is low-grade evening rise of fever. However, tuberculosis may present with any type of fever including a sudden high fever as seen in immune-mediated pleural effusion in a healthy child.This is because host response decides the type of pathology and its clinical presentation. Such changing trends have been observed in all diseases and pose a challenge in the diagnosis. Vaccines offer immunity that may not be fully protective and such a child manifests witha modified clinical presentation that is not easy to recognize. Similarly, a malnourished child presents in a non-classical atypical way. Even the outcome of therapy depends on the host's ability to respond appropriately and hence there could be a varied type of progress in a disease treated in the same way. At times, the immune system of the host mounts an inappropriate exaggerated immune response that is responsible for immune complications affecting multiple organs and it happens even after the infection is well controlled. Science does not know as yet how to modulate the appropriate immune response. This is a new challenge difficult to manage. Changes based on environmental factors As the infective disease becomes endemic, the majority of persons including children in the community become

infected and many of them develop immunity even without developing a disease. If infected again with the same offending agent, clinical manifestations are mild and often not recognizable. Similarly, exposure to tuberculosis infection that did not progress to disease leaves behind hypersensitivity and if reinfected, manifestations are different, take the form of destructive lesions as compared to first-time infection. Increasing air pollution has resulted in a higher prevalence of respiratory diseases including asthma and allergic rhinitis.

Changes based on offending agent

Number of organisms and their virulence decide the severity of clinical presentation and drug resistance adds to the difference in the outcome. Clinical presentation is different in a child who has developed partial immunity as compared to a child who has no immunity at all against a particular infection. Misuse of antibiotics is universal that has resulted in antibiotic resistance with an increase in morbidity and mortality, Microbes keep on mutating and fooling our immune system. That is how the influenza viral vaccine has to be repeated every year.Lifelong immunity to natural infection is also likely to wane off necessitating vaccination even in adults and pertussis is a classicexample.

Changes in medical practice

High dependency on laboratory tests

There is a widening gap between traditional wisdom and modern science that has been further accelerated with the concept of evidence-based medicine. Availability and

accessibility of modern tests have definitely made an impact though only in selected cases but it is unfortunate that is far more misused routinely even in non-affordable populations. Tests are offered without a provisional diagnosisand at times, there is a tendency to treat reports without clinical correlation rather than treating a disease or a person in whom the disease resides. Tests should ultimately benefit a patient and it is possible only when the test is able to define the cause of the disease for which specific treatment is available. Patients are dissatisfied when multiple tests do not result in final improvement. It is important to counsel about the need and benefit of test results before ordering tests so that patient and his relatives understand the implications of tests. Evidence-based medicine

Evidence is of different degree, the lowest degree is an anecdotal experience. Evidence and experience both are two sides of the same coin. Evidence is based on averages and may not be a fit for all while experience is tailored to individual patients. Evidence depends on external research while experience on internal expertise. Both need to be judiciously used but there is a trend to consider the evidence without experience. With changing host factors, evidence may not be applicable to individual hosts.

Super specialisation – boon or bane? Superspecialist has to be excellent generalist to be rationally effective. It is ideal if a superspecialist spends 25% of his time with a generalist so that he does not overlook more common diseases with atypical presentation rather than trying to test for rarer ones. After all, several diseases affect multiple organs and it is not

uncommon to see each superspecialist sees only through his biased angle. Profession tuned into business!
Medicine is a profession and not a business. Business has a single motive of earning money while a doctor in the profession has a priority of providing holistic care to his patient while earning money Business involves selling the goods irrespective of their worth whereas profession involves giving the correct advice to the best of one's knowledge that is likely to benefit the patient. Unfortunately, there exists undisputable depersonalization of patient care with its consequences of patient dissatisfaction, legal suits or violence. It is a challenge to set clear goals of rational practice but it is very much possible with intrinsic motivation. It will bring more happiness in life than mere success. In fact, success lies in happiness.

Personal notes

I witnessed changes in every aspect of life as so-called "development" had made life more complex and one had to adapt to such changes. Medicine is no exception. While it was difficult to keep updated in science, I was lucky to get opportunities to teach while in practice, after all, teaching is the best way of learning. It has taught me how to be careful at every step to avoid mistakes. And even then, mistakes did occur and I hope I learnt from them. I spent 4 hours a day attending my duties during my tenure as an Honorary teacher and many thought I had nothing better to do. However, it was much more challenging to refrain from unethical practices and conduct rational practice. I was aware

when few parents of my patients wondered why I spent so much time on detailed history and considered it as my inability to decipher the problem quickly.I remain motivated to adapt to changing trends, though I am aware it is difficult if not impossible. I have learned to be vigilant to focus on my limitations and seek timely help from others. The community also has changed andso also their expectations from doctors as they have more faith in laboratory tests than on doctor's clinical diagnosis. I often meet parents who come with knowledge acquired from Google-God and challenge my opinion. In such situations, I end up with "you may be right but this is my honest opinion that is documented and it is to the best of my knowledge" and leave them without further argument. I have learned patient has a choice to follow your advice or not.

Take home message

Changing trends in medicine call for constant updating and the doctor has to be a lifetime student. It is important to find time for continued education even in a busy practice. Changing trends in medical practice demand setting clear goals to achieve rationality and excellence and not fall prey to "rat race". Once you are motivated, habit sustains it to make life happy and worth living.

Chapter 4. Diagnostic process often reversed!

We need proper balance in medical approach – Mark Twain
Before you examine the body of a patient, be patient to

hear his story, once you learn his story, you will also come to know his body – Suzy Kassem

Introduction

The process is nothing but a set of defined activities that have stood the test of time. It describes how a task should be performed and provides focus to make it better to ensure a successful outcome. The diagnostic process in medicine should follow the same principles. It is more important than a goal and the right process done in the right way leads to success

Diagnostic process in medicine

The diagnostic process in medicine is complex but should follow the standard sequence. It should be a patient-centric activity of gathering information, information integration and interpretation (analysis of detailed history), complete and standard physical examination (with a focus on areas guided by history analysis) to form a working diagnosis. It is only after a provisional diagnosis is made that priority diagnostic testing is planned to confirm the final diagnosis. This is a process of diagnostic refinement followed by diagnostic verification. It brings in rationality, confidence, and consistency, enables planning, eliminates mistakes, improves outcome, avoids misuse of laboratory tests and drugs, saves time as well as cost and offers satisfaction to patients. Detailed history analysis contributes to more than 80% of provisional diagnosis and thus enough time should be spent on gathering the right information. History is not his story;the patient focuses on what bothers him the most and not what

the physician would want to know. History should follow the principle of “thought in action”. It means each question should be deliberate with a specific purpose, the answer to which should lead to the next relevant question. The thorough physical examination will further narrow down the differential diagnosis inferred from the analysis of detailed history. There exist increasing options for diagnostic testing, from which appropriate tests should be selected based on the provisional diagnosis. Epidemiology of common diseases should guide the priority of tests.

Reversed diagnostic process – a MISS approach

Rising complexities of health care, ever-increasing advances, physician time constraints and often cognitive limitations have been responsible for the reversed diagnostic process. **MISS** approach starts with **M**anagement first without consideration of probable diagnosis with polypharmacy and if it does not work, then the next step is to **I**nvestigate, again without any clue to a provisional diagnosis and hence multiple tests are ordered at random hoping to get a diagnosis from one of the several tests. Such a process results in confusion more than a diagnosis. However, such a diagnosis even when obtained may not correlate with clinical profile and so may be erroneous. Finally, when both management and investigations fail to provide a diagnosis, it is time to ask for **S**ymptoms and look for **S**igns on physical examination. These are shortcuts to the standard diagnostic process and such a reverse diagnostic process is prevalent in the modern era and is obviously a disaster.

Tests not for diagnosis but for confirmation

Diagnostic testing has become a critical feature of standard medical practice. Tests are expected to define anatomy, pathology and if possible, etiology and complement bedside medicine. The etiology of most diseases has been conjectural and remained elusive with an exception of infections. Limitations of tests must be kept in mind, sensitivity and specificity of tests need consideration. No test is 100% dependable as a negative test may not rule out disease and a positive test may not necessarily confirm the disease. For example, negative blood culture does not rule out bacterial infection and positive blood culture may be a contaminant or a commensal. Choosing appropriate tests need provisional diagnosis. Priority of ordering tests must be based on Sutton's law – common things first. It is said that when you hear hoofbeats, think horses, not zebras. Ordering multiple tests to rule out every possibility is an increasing trend that is not justified. It is irrational, not cost-effective and stressful to a patient. Unfortunately, patients demand tests as they consider tests superior to clinical diagnosis and doctors find it convenient to shortcut the diagnostic process. At times, you end up treating tests and not the patient.

Missing “high-touch” medicine

Interaction with the patient while history taking and physical examination in a standard diagnostic process help to build a rapport and a bond between the patient and a doctor. It demonstrates concern, honesty, responsibility, accountability and transparency on the part of a doctor and instills faith,

confidence, satisfaction and compliance on the part of the patient. It in many ways leads to divine healing. “High-tech” medicine deprives all such benefits and treats a patient as an inanimate object. Thus, “high-tech” medicine should be judiciously used only after the “high-touch” process is followed.

Personal notes

My teacher once told me that when he joined as a pediatric resident in UK, he had to undergo a routine health check before starting the post. A senior general physician examined him in detail including testing for the entire sensory system. My teacher was surprised as he thought this was a cursory requirement as young aspiring residents would be most healthy. He asked the physician why he had to examine in so much detail. To which, the physician asked whether it was not the way physicians conducted the clinical examination in India. My teacher understood the message and he became enlightened even before joining the post. It is common to find a junior colleague asking me for a second opinion because he has no clue to a diagnosis in spite of several investigations and trials with antibiotics. In one of suchincidences, when I asked him what his provisional diagnosis had been, he quickly said he did not know and that was why he was requesting me to see his patient. This was a classical MISS approach. I recall a bright undergraduate student who had learned to take a detailed history including family history. He was taking a history of a lady who had fallen down from the 1st-floor gallery while puttingclothes to

dry and in thoroughness, he asked whether there was a history of any family member having fallen the similar way. He is today sincere rational doctor. The astute family physician observed mild puffiness of face, engorged neck veins and propped-up eyes in a person who had come for a minor illness and had no major complaints. The person was referred to a nephrologist, cardiologist and endocrinologist for an opinion on probable diagnosis but all tests were negative and each specialist vouched it was not the problem of his specialty.The personconfirmed from his family physician that he had the unusual disease, the fate of which was unknown. So, he decided to enjoy his life before he could worsen and so planned a world tour. He went to a store to buy branded shirts. The Attendant asked for his collar size and when is said 16, the attendant said if you wear such a tight collar, you would get puffiness of eyes, engorged neck veins and propped-up eyes. The person knew his diagnosis.

Take home message

The diagnosticprocess in medicine should be followed sequentially in each patient – to find anatomy first, followed by pathology. (Medical curriculum is in the same sequence – it starts with anatomy and physiology and then goes on to pathology (it is disturbed physiology). Anatomy and pathology can be reasonably assessed by history and physical examination while etiology is guesswork based on critical thinking. It is only then that investigations should be ordered to confirm the probable diagnosis. Thus, tests are ordered as

per the provisional diagnosis. It gives a thrill to a physician when minimum tests confirm the clinical diagnosis. Physicians must audit their clinical performance and it is the only way to be an accomplished doctor.

Chapter 5. Super-specialist – boon or bane

We have run into the law of diminishing returns in health care, where we are doing more and more, with higher and higher technology, at more and more cost and less and less benefit – Richard Lamm
The whole imposing edifice of modern medicine is like a celebrated tower of Pisa – slightly off balance – Prince Clarkes

Introduction

Super-specialist has a depth of knowledge in a small part of medical science at the sacrifice of breadth. He has a deep understanding of a narrow field that is vital in management of selective complex cases related to his specialty. It means there has to be a generalist who can detect such a case that needs the services of a super-specialist. If a patient visits a super-specialist directly, there is a greater chance of a doctor ruling out diseases related to his super-specialty with as many tests as possible and patient referred to a generalist. Generalist has a wider but superficial knowledge, breadth without depth and should have an ability to detect a problem that needs a referral to a super-specialist of relevant specialty. Super-specialties are well developed in adult

medicine / surgery in India and are also developing over last 2-3 decades in Pediatrics with increasing speed, so also in most other branches of modern medicine.

Diseases do not respect a specialty

Apparently localized disease to a small area of the body also may affect structure or function of other systems and hence most diseases are general in that sense. It is therefore necessary that every patient must be thoroughly examined even when presented with localized disease and every doctor – generalist, specialist and super-specialist- must be knowledgeable and competent to do so. Moreover, few symptoms represent multiple systems. Surgical diseases often are first seen by generalists and at times, medical problem may simulate a surgical issue and be seen by a surgeon. Is it not then necessary that irrespective of specialty, every doctor needs to be a basic generalist?

Making of a super-specialist

After completing basic graduation (MBBS), specialty training spans over three years (MD / MS). A specialist must continue to be an excellent basic generalist with deeper knowledge – increased depth in common problems but maintaining wider breadth and so should be able to handle atypical presentation or complications of common diseases in the community. However, during super-specialist training, the trainee focuses on a narrow part and loses the contact with general medicine / surgery. As time passes, he gets more detached from the generalist approach of basic medicine. As mentioned above, no disease respects the boundary of any

system. Thus, super-specialist has to refer a patient to one or many specialists for even simple issues that are perceived to be beyond his domain. In such a situation, often there is no single doctor coordinating views of different specialties. It is nearly impossible for direct communication between different specialists and is often a cause of concern to a patient. In such a situation, a patient could be treated by doctors of different specialties without coordination between all of them.

Pros and cons of a super-specialist

With deeper knowledge of a small part, super-specialist is able to diagnose common as well as uncommon presentation of rare diseases. He is able to keep up-to-date in his narrow specialty and thus knows the latest advances in his field. This is a boon for a patient suffering from such a rare disease. However, a super-specialist often tries to rule out every possible disease in every patient, forgetting Sutton's law "think common first" or as it is said "when you hear hoofbeats think horses, not zebras". (Suttan's law is named after Willie Sutton – a bank robber who when asked by the judge why he thought of robbing the bank, he said that is where most money lies). Thus, super-specialist does not consider common diseases as he has lost exposure to common problems and in turn depends heavily on multiple tests rather than clinical judgment. He does not consider provisional diagnosis to plan investigations as he considers possibility of every disease in each patient and so can opine only after all test results. All of us are aware of fallacies of

test results. This assumes far more importance when resources are limited.

How to ensure “boon” and avoid “bane”?

There is no doubt, we need super-specialists and in future also super-super-specialists – one who would know everything about a smaller part of a super-specialty. Super-specialty is for the few and by the few. But to ensure rational benefits to the community, a super-specialist must be an excellent basic generalist. In order to be a sound generalist, super-specialist must spend 3 months of each year in general medicine / surgery throughout his career. If not, a super-specialist could become a bane. I recall having met the Chief Pediatric endocrinologist at Great Ormand Street Children’s hospital in London who insisted that each faculty member in his department worked in general pediatrics for 3 months of each year. This was necessary because children referred for short stature to his department from all over Europe were often suffering from non-endocrinological problems such as celiac disease or chronic renal dysfunction. In absence of such a periodic exposure to general pediatrics, patients would be subjected to multiple investigations to rule out endocrine issues and then referred to a generalist. Super-specialist should not make a diagnosis on the basis of tests alone but must consider bedside provisional diagnosis thereby limiting tests to a minimum. While making a definitive diagnosis is a priority, rational practice demands minimum laboratory tests planned on the basis of provisional bedside diagnosis. Super-specialists often miss this approach

and consider possibilities more than probabilities in every case. Then it becomes a bane. Let us not forget medicine is an art of probability.

Supply should be commensurate with demand

We need to estimate future demands of super-specialists and plan supply chain accordingly. India is close to achieve an ideal doctor-population ratio of 1:1000 though it is skewed in terms of geographical distribution and it includes generalist doctors (family physicians) and also specialists-generalists (MD / MS). As per Pareto principle, 80% problems are solved by 20% efforts and remaining 20% problems by 80% efforts. This applies well to medical practice. Thus, we definitely need more family physicians than specialists and more specialists than super-specialists. Of course, at all levels, doctors must practice preventive medicine promoting health rather than just being disease managers. Present generation of medical graduates are attracted to ever advancing medical technology to become super-specialists. If this trend continues, community may not be best served with shortage of generalists. Super-specialists are necessary for the few and should be few.in numbers.Facilities for modern technologically advanced super-specialists such as transplant surgeons, immunologists and geneticists should be restricted to few centers so as to develop a large expertise rather than every small center dabbling into it. In USA, ratio of general pediatricians to pediatric super-specialists is 2:1. This is ideal only when vaccine and hygiene preventable diseases are extinct in the community. However, our epidemiology of

diseases is different and as of now, we need far more generalists than super-specialists.

Personal notes

It is not rare for the community to seek super-specialty opinion directly with a focus on one major symptom. I have seen a patient with vomiting directly meeting a super-specialist, GI specialist who rules out problems of his domain after several tests, surgeon ruling out intestinal obstruction, neurologist asking for neuroimaging to rule out brain tumor, nephrologist ordering renal function tests and metabolic specialist going through many tests. Highly accomplished doctors ask for all these tests so as not to miss any disease. Only if these super-specialists were excellent generalists, diagnosis could be achieved most rationally with minimum tests. As a senior generalist, patient often seeks my opinion after visiting few super-specialists, especially when symptoms are vague and overlapping such as prolonged fever or persistent vomiting. This is a reverse referral and speaks of compartmentalization of medical practice that becomes a bane. I recall when my father as a family physician would accompany a patient to a specialist that facilitated better monitoring of a patient and also a learning opportunity to a family physician. He could also question the specialist for clarification. Such a rapport between a referring doctor and a specialist is almost non-existent today.
A cow was shown to an intern and asked to identify the animal. He instantly said it was cow and when asked whether he would investigate to confirm, he emphatically refused, he

was sure. Same animal was shown to a specialist who also identified the animal right but wanted to confirm by tests “just to be sure”. He had leant “evidence-based medicine”. He did not want to miss any other diagnosis. Finally, same animal was shown to a super-specialist. After a close intelligent look at the animal, he said there would be many possibilities such as hypertrophied goat or atrophied elephant that he would investigate to rule out. He also cited case reportsin world literature in his support. And once all such possibilities were ruled out, he would consider it to be a cow. Finally, everyone got it right but intern was most rational, specialist cared for evidence-based diagnosis and super-specialist would not take any chance.

Take home message

Every doctor must be a competent generalist irrespective of his specialty or super-specialty. Success is achieved with wider experience achieved through formative years and sustained through periodic exposure to general approach. Thus, every doctor must try to be both – a generalist must know bit of specialty and specialist and super-specialist must know enough of basic general medicine. This alone will avoid perverse effects of super-specialisation and serve the community better.

Chapter 6. Old and new – make the best of the two

Old is gold but new may be a diamond but don’t forget it is the gold that holds the diamond – Igeenell Timmons In

modern medicine we have a name for everything but cure almost for nothing – Charles Coleman

Introduction

Modern medical science is advancing rapidly and newer technology attracts everyone's attention. It has made a significant impact on health care but also is vulnerable to be misused. This is because majority patients in the community can be well treated by time-tested old methods of basic medicine and do not justify use of modern technology. Modern technology also has limitations and hence it should be used selectively only after proper counselling. Though it has widened our understanding of diseases, present knowledge lacks ability to offer significant advantage to majority patients. Level of clinical suspicion and probability of a given test result can be correlated, higher the degree of clinical suspicion, more likely the test result will confirm the diagnosis. Therefore, it is time that present generation of doctors must learn when to avoid use of modern technology, instead excel in use of basic medical approach of making a provisional diagnosis. At the same time, older generation of doctors must be continuously updated to know where modern technology can benefit the patient.

Old not entirely gold but all that glitters is also not gold

Science has changed but----

Over last six decades of my medical career, I have seen a drastic change in understanding of diseases and their management strategies. This has been possible only because of modern technology. I recall the days when simple chest x-

ray was also not freely available and fluoroscopy was used routinely with its inherent dangers and subjective interpretations. Today we have many imaging modalities that depict not only structural but also functional changes. Infections can be diagnosed with precision and with the development of Immunology and genetics, it has been possible to get deeper insights into causation and progression of diseases. Invention of newer drugs and therapeutic interventions have revolutionised treatment strategies. Thus, “old” ignorance in science has been replaced by “new’ understanding. Previous generation of doctors must keep updated and take help of technologically trained newer generation of doctors. It is important to realize that part of the present-day advanced knowledge will be obsolete by next decade as medicine is ever changing, hopefully for the better. It calls for continuous learning.

Science has changed but not art of medical management

Art of history taking and physical examination as well as art of communication and behavior with the patient has been time-tested and so remained the same over centuries. Ethics, empathy, concern for the patient, honesty, transparency, responsibility, accountability, communication and counselling made patients feel better, even when science had not much developed. Physicians always cared for the patients if not able to cure and patients showed gratitude and faith in doctors. Present generation of doctors have largely ignored this aspect of patient management in pursuit of modern science. It has made patients feel unhappy and lose faith in doctors. Thus, image of medical professions has been

maligned. Present generation of doctors must reverse this trend and follow this part of “old” while using “new” selectively and rationally.

Limitations of modern technology

While taking history, an uninterrupted and patient listening to what the patient has to say is an exercise in developing a rapport between the doctor and a patient. It is a measure of doctor’s empathy and concern about the patient and it makes the patient feel assured. Further, physical examination establishes a bond with appropriate human touch – “high-touch” technology. This sets the tone for developing faith in the doctor and helps in recovery of a patient. Misuse of modern technology lacks such opportunities and thus misses an important factor in the management of a patient. Diagnostic technology has also many inherent limitations Peripheral blood smear is the most important part of blood investigations and modern technology is of no use as it needs an experienced and committed pathologist to examine the same. Similarly, treating physician has to corelate test results with his clinical judgment. In fact, every technology has inherent issues that come in the way of correct interpretation. Today, most laboratories perform CBC on automated counters that differentiate blood cells based on the size of cells, smallest size is a platelet and largest size is a leucocyte and size in between is an erythrocyte. If erythrocytes are of smaller size as happens in commonly prevalent iron deficiency anemia, automated counter includes them in platelets and platelet count goes higher

than actual. If a child suffering from thrombocytopenia also has iron deficiency anemia, platelet count on automated counter may be normal and diagnosis can easily be missed. Besides the issue of interpretation, technical error in performing the test can give erroneous results as happens in case of a small blood clot while loading the sample. Commonly available counters can differentiate polymorphs and lymphocytes but not monocytes, eosinophils and basophils that are all clubbed together in one common category. So, in spite of automated counter, a pathologist must see the peripheral smear to assign relative value to these three types of cells included in another category. This means that a pathologist must have good basic knowledge. Of course, now latest generation of counters are being invented to overcome such difficulties. Further, CBC results by themselves are not diagnostic of any disease and even a simple difference between an infective and non-infective disease or between viral and bacterial infection are also not possible. This brings in a point that basic knowledge of medicine is required for right interpretation in spite of modern technology. If it is true of a simple test, then it must be more problematic in complex tests such as genetic or immunological tests. Even in case of monogenic genetic defects (for example, cystic fibrosis), more than several hundred mutations are known and as all mutations cannot be tested, negative test does not rule out the disease. In such a situation, physician has to fall back on clinical approach and treat the patient. In case of oligogenic or polygenic defects, problems are further compounded even though newer tests

such as microarray or gene sequencing are invented. Finally, positive genetic test has very little relevance to the index patient and theoretically may be useful for prenatal detection. Immunology plays an important part in causation, progression and outcome of diseases. However, such tests merely suggest the probability but are not diagnostic of autoimmune or infection induced immune disorders and need correlation with clinical profile.It is clear that modern technology cannot replace basic clinical approach and competence. Technology must be used as a servant (summon whenever required but ignore if necessary) and not as a master (to dictate actions). Besides, the cost is a concern.

Rational use of modern technology

Diagnostic technology must be used judiciously with primary aim of offering direct benefit to the index patient. It is **i**mportant to estimate pre-test probability of usefulness to a patient before ordering the test. It helps to decide whether to order a test or not. However, there could be indirect benefit of diagnostic tests to the family or community, even if not to the index patient and also could improve scientific understanding for doctors. For example, genetic tests in an index patient may be useful to predict recurrence of same defect in the next pregnancy and similarly RT-PCR test for covid helps monitoring epidemiology of the disease. In such a situation, patient and his relatives need to be well communicated and counselled before ordering the test so that they understand the advantages and limitations of these tests. Therapeutic technological advances have been much

more useful to patients. Interventional radiology and cardiac procedures, minimal invasive and robotic surgical techniques and organ / stem cell transplants have definitely benefited patients though often not affordable or accessible. In such situations, communication and counselling play very important role to explain risk-benefit ratio and long-term implications that are inherent with some of these advances.

Personal notes

I have often seen patients complaining about doctors ordering multiple tests and interventions. This is true more when the results of tests are negative, suffering continues and diagnosis is at bay. When desirable outcome is achieved, even irrational use is mostly condoned. It is not wrong on the part of doctors to use modern technology only if its use is rational, can be justified, patients are adequately counselled and explanation is properly documented. Doctor should be accountable to his own conscience about rationality, justification and proper counselling. This is found lacking in many present generations of doctors. It is not rare for doctors to pursue final diagnosis even when final outcome is known to be poor and in absence of pre-test counselling, parents feel cheated in spite of doctor's good intensions to arrive at a final diagnosis. In such cases, patient must be given a choice of making a decision regarding further testing. What concerns the patient most is the present benefit and not future of science.

I saw a bird watcher focusing at a distance through his high-tech binoculars but the bird was sitting just behind him and it

must be wondering whether to alert the bird-watcher to look behind. Many times, physician focusses at a distance but misses what is near.

Take home message

There is a need for intergenerational learning. Doctors of previous generation must at least be acquainted with newer developments and direct patients appropriately to seek better advice. They should therefore keep updated by attending CMEs and through interactions with the highly trained present generation. This alone will offer the advantage of modern science to patients.
At the same time, present generation of doctors must attempt a provisional diagnosis before ordering tests and avoid misuse of modern technology by judicious selection. Art of medical practice is most essential part of patient management and will remain so irrespective of modern technology and this fact should be born in mind by present generation of doctors.
This is the only way to make old and new work best together.

Chapter 7. Doctor-patient relationship

Doctor is both a scientist and humanitarian, his most decisions lie in the field of patient relations – David Allman
Doctor patient relationship is critical to the placebo effect – Irving Kirsch

Introduction

Relationship refers the way both the parties behave with each other. Naturally, both are equally responsible for

maintaining harmonious relation that is vital for successful outcome. For a doctor, professional success should be a long-term continuous process and depends on “word-of-mouth” publicity while for the patient, success is one time issue related to cure of his illness. Besides, sick patient is likely to be unrealistic in his expectations and pose a challenge. Hence, primarily it is doctor’s responsibility to forge a harmonious relation with patients and must learn to handle situations that have potential to become a roadblock.

Foundation of ideal relationship

Contemporary medical ethics is the foundation of doctor-patient relationship. Medical ethics is a system of moral principles that apply value and judgment to medical practice. There are four pillars of medical ethics – beneficence (do best to the patient), non-maleficence (do no harm), justice (impact of decision) and autonomy (respect patient’s rights), There are many more related important issues such as patient empowerment, confidentiality, informed consent, communication, counselling and documentation, don’t run down peers, don’t hide ignorance and equity (treat everyone as per the need). Ethics in medical practice is a measure of honesty, transparency, responsibility and accountability and is inseparable from medical competence. In addition, patient hearing and empathy result in quality care that builds mutual faith, respect and trust between doctor and patient. Patients don’t care how much you know but definitely want to know how much you care.

Integrate art into science of medical practice

While scientific knowledge and constant updating is essential, art of medical practice is as important as science to foster ideal doctor-patient relationship. Art includes, besides ethics, basic components such as skilled planning and time management, philosophy – patient hearing, honest opinion and explanation, culture – organized, disciplined, courteous and respectful behavior. Perfect combination of ethics with art and science offers "care always, cure if possible" in medical practice that builds mutual faith, respect and trust between doctor and patients.

Deteriorating doctor-patient relationship

Both parties are responsible though as mentioned above, doctors are expected to be proactive in fostering good relation with patients. Current scenario is far from the ideal.

<u>Deficiencies in doctors' behavior</u>

There is an indisputable depersonalization in medical practice. Instead of making sensible decisions with basic clinical skills, there is a spurious outsourcing of common sense to modern technology. Doctors tend to treat tests rather than the disease and ignore the human being in whose body the disease resides. This has resulted in opportunity for exploitation and unethical medical practice, with profession turning into business. Rapid-fire investigations and gun-shot therapy is often based on external motivation either fear / punishment or incentives. Thus, affordable health care becomes an area of ethical conflict. Ethics, communication, counselling and documentation are often missing in pursuit of scientific outreach. Doctor-centered approach projects

doctor as an expert and patient is expected to abide silently without asking questions. Conversational dominance and short time spent with the patient do not offer opportunity for discussion. Sadly, art and ethics of medical practice are not taught in medical schools and absence of role model teachers deprives medical students to learn this important aspect of medical practice. Further there is lack of control on quality of medical education and medical practice. All these deficiencies have eroded faith and image of medical profession and is the cause of deteriorating doctor-patient relationship. While every doctor would like to see his patient recover completely, his efforts must be made visible by repeated communication and counselling so that patient does not judge the doctor by the outcome. This is the only way to ensure ideal doctor-patient relationship.Deficiencies in patients' behavior It is patient's right to know about his disease and management plan. However, most patients expect "cure" of the disease and relate outcome to doctor's competence and efforts. They do not understand limitations of medical science and that of a doctor who cannot cure every disease even with best of competence and intentions. Earlier generation of patients had full faith in their doctors and they were satisfied with doctor's best efforts irrespective of the outcome. Lack of faith in doctors of present generation of patients is the cause of poor doctor-patient relationship for which I consider doctors equally responsible. Poor outcome of a disease is often beyond control of a doctor but patients in such circumstances behave with vengeance and unacceptable

violence. Outcome in other professions does not decide level of competence of a professional. A lawyer is not blamed for a defeat in a law suit and teacher is not blamed if students fail. People understand multiple variable factors involved in final outcome. Same is true and even to a much larger extent in medical practice as outcome primarily depends on patient's ability to fight and not just on doctor's competence. Even when life and death is the question in medical practice, patients are not expected to behave irrationally. After all, humans are not immortal.

Consequences of deteriorating doctor-patient relationship

Unethical practices by doctors and unrealistic expectations leading to irrational behavior of patients have resulted in erosion of faith, trust and mutual respects for each other. Present generation of doctors practice defensive medicine that demands large number of tests and interventions with increase in cost of health care. It is a known fact that error of commission is more acceptable and condoned than error of omission that is punished. Doctors look at every patient as a potential litigant while patients look at the doctor as one who would cheat. This kind of behavior on the part of patients has led to increase in number of legal suits against the doctors and hence doctors justify defensive medicine. Besides doctors have to face danger to their own life and property. Hence, present generation of doctors have to spend for professional indemnity insurance against such possible events and such extra expenses are indirectly borne by patients. It has further vitiated doctor-patient relationship

with disadvantage to both the parties. As such we are short of doctors in proportion to the population in India and present generation of doctors prefer their children to pursue any career other than medicine due to many adverse factors.

Can we reverse this trend?

It is possible if both the parties introspect their behavior pattern and change appropriately.

Doctors must change first Time management is the key to better communication, counselling and documentation. Doctors are also required to keep updated constantly and find time for the same as medical science is dynamic and the only constant is the change. In busy practice also, doctor must find time without sacrificing quality of practice and it is possible only with group practice. This is necessary as doctor is not supposed to deny seeing a patient irrespective of time constraint and still is expected to offer best quality of service. Thus, group practice is ideal also for life of a doctor as he can find time for family and his own leisure, hobbies. Rational practice needs integration of art and science and doctors must acquire art of practice that involves ethics and empathy besides many other moral principles. Unfortunately, this is not taught in medical schools but it is left for individual doctors to follow art of practice by internal motivation that comes from within. It is the same motivation that should sensitise a doctor to keep updated in science. Once internal motivation gets started, it becomes a habit and is sustained forever. External motivation depends on fear / punishment or rewards, it is short lasting and often is a cause of stressful

life. Patients also must change their behavior

Patients must learn to be patient. They also have equal responsibility to facilitate ideal relationship with the doctor. They must have full faith and trust in their chosen doctor. They must understand limitations of medical science and not expect unrealistic outcomes. They must come prepared for doctor's visit that enables them to describe relevant details of their complaints. They must follow doctor's advice and instructions for follow-up. They must report back irrespective of improvement or otherwise. It is commonly seen that patients rarely report if they are better and it deprives the doctor of knowing his good results that boosts his confidence. Patients are expected to be transparent and honest. They should not hide any information that itself may prove to be a disadvantage to themselves such as other opinions. Lastly any bad outcome cannot justify vengeance and violence damaging doctor's life, property and image. There are better methods to challenge the outcome if so desired.

Personal notes

I am very happy when patient leaves my office with satisfaction and gratitude, my day is done! I recall few instances when patients were argumentative and I have learnt not to counteract even if patients are wrong. I remember an incidence when a child with fever was brought to me for second opinion and his mother asked me whether fever could be due to multiple myeloma. I was surprised to

hear such a question. She informed me that she herself had similar fever that was finally diagnosed as multiple myeloma and her doctor had missed it completely for which she had decided to confront him and take him to the court. I knew the concerned doctor as most honest and competent physician and felt bad for him but avoided any further conversation. Few months later, when I met this mother, she herself narrated what happened when she went to fight with the doctor who had missed her diagnosis. When this doctor was shown final diagnosis made by another doctor, he banged his fists on the table and agreed that he had missed the diagnosis and it was his fault. This honest behavior of the doctor made this lady to decide against going to the court. Honesty is the best option and not the defensive argument to justify wrong action. I know of a very competent doctor when asked by his patient whether he was sure of his diagnosis, was upset and angrily said “do you know whom you are questioning, I talk only when, I am sure.” This is ego and rudeness. Patient swore not to see him again in spite of his competence and commitment. We must mind our tongue!

Take home message

We must accept the fact that there is definite deterioration of doctor-patient relationship. Cordial relation plays such an important part in management of diseases. It is bipartite responsibility though doctors should be proactive in forging such a relationship. Time is the key factor for doctors and they must find ways to manage time for which group practice is an ideal solution. It also improves doctor’s private life.

Patients must be equally honest and transparent and must have full faith and trust in their chosen doctor. Unrealistic expectations and irrational behavior is not acceptable at any cost as there are better methods available for redressing their grievances.

Chapter 8. Doctor-doctor relationship

What you do not want done to yourself, do not do to others – Confucius
Ultimate test of relationship is to disagree but to maintain mutual respect – Alexandra Penny

Introduction

Ayurveda – ancient science of life – had laid down code of conduct for physicians, to be righteous in every action. Aristotle – Greek philosopher – 384-322 BC advocated good conduct for physicians. American Medical Association formed a committee to formulate code of conduct for physicians in 1846. World Medical Association formed international code of conduct for physicians in 1947. In 1970, traditional medical ethics were found to be inadequate to deal with changing medical practices that led to widening scope of ethics. Besides four pillars of medical ethics – beneficence, non-maleficence, autonomy and justice, there are many other related issues that are very much part of medical ethics and one of them relate to doctor-doctor relationship. Medical council of India in its notification has elaborated on doctor-doctor relationship." I will treat my colleagues with all dignity

and respect to maintain honor and noble traditions of medical profession". It adds "don't run down peers. Relation between doctors should be one of friendship and cooperation. However, physician should expose without fear or favor, incompetent or corrupt, dishonest or unethical conduct on the part of members of the profession."

How important is doctor-doctor relationship?

While doctor-patient relationship is at the core of holistic care, doctor-doctor relationship has clear importance and indirect contribution in boosting confidence of patients and thereby helping healing process. Unfortunately, this aspect is mostly neglected. Modern medical science has advanced with leaps and bounds to an extent that no physician can claim to know to treat every patient well enough, under his / her care. There is old Greek proverb "one man is no man". Owing to increasing complexities of modern medicine and technology, interdependence of doctors is assuming more importance with need for its close collaboration. Every doctor, be it a family physician or specialist, is likely to need advice or help from one of his / her colleagues. On the other hand, a doctor is called upon to help a colleague, either suggested by a treating doctor or requested by patient or his relatives. Such a consultation is intended to do more justice to the betterment of a patient without causing confusion, even in the face of difference of opinion. It is vital that both the concerned doctors "discuss" without "argument" and convey unified action to the patient. Discussion is to find out what is right while argument is to decide who is right.

Responsibility of good conduct during such a consultation rest more on senior colleague whose help is sought by primary treating doctor. In such a consultation, no insincerity, rivalry or envy should be indulged.Doctor must behave with his colleagues the way he would expect his colleagues to behave with him. Doctor should consider it a privilege to help his colleague when asked for. In this relationship, every doctor must learn to make unambiguous statements with measured words to avoid any misunderstanding or misinterpretation. At times, same message delivered in different words sounds contradictory to each other that adds to confusion in the minds of patients. Ideally, such a consultation is usually “one time” help to a primary treating doctor who thereafter continues to treat his patient in the suggested direction. Doctor who provides help to a primary treating doctor should refrain from direct contact with the patient. Such a conduct between doctors not only boosts confidence of patients but also improves image of the profession. It has a direct benefit to the society and is a win-win situation for doctors and the community.

Introspection - Quo Vadis – where are we going?

Contemporary medical ethics is the very foundation of medical practice and is inseparable from medical science and doctor’s competence. Unfortunately, art of medical practice is missing while there is scientific overreach with outsourcing common sense to modern technology that has increased cost of health care. Unfortunately, technology has de-humanised medicine. Patients consider medical profession as business

and suspect every action irrespective of doctor's intentions that has maligned image of medical profession. Medical council of India has miserably failed to maintain high ethical standards that are required to promote moral values. Indian Medical association has equally failed to control irrational methods of practice that has hurt general welfare of the community and has eroded faith in doctors.
Negative professional criticism of another doctor, in the pursuit of money and prestige, damages reputation of the profession. May be an unintended (or was it intended?) casual remark such as "I wish I was called a bit early, it is already late" can spoil the situation. I know a doctor who would change the brand of a drug claiming better response as compared to a brand prescribed by primary doctor, making a patient doubt the very competence of his primary doctor. Such "one-upmanship" to take an advantage of a situation is a gross violation of code of conduct. I must admit that such an overt misconduct is rare today but one can always feel an undercurrent of occult attempts at such behavior between doctors in the present "rat race". After all, even if you win the race, don't forget you are a bloody rat.

Can good conduct be taught?

I understand that Medical Council of India has now included "medical ethics" in undergraduate curriculum. However, art of medical practice is not learnt in classrooms but must be witnessed at the bedside of patients through a role model teacher. It should start from teacher-student relationship during undergraduate training period. I was lucky to have

had teachers with high ethical values whom we tried to emulate. Present generation of medical students need such teachers.During my tenure as a post-graduate student, an intern was posted in our unit who was in a habit of expressing his views on every patient during ward round and we all thought his undue and untimely enthusiasm had to be curbed in order not to waste time on rounds. But Dr M.M. Wagle, my chief differed and said “it is good this boy is thinking even though he does not know enough. So, give him time to understand his limitations but don’t stop him, he is after all learning”. It was a lesson on how to behave with a student. I recall first day of my joining as an honorary assistant Prof in Pediatric Department at J.J.Hospital, Mumbai. Dr Wagle greeted me and asked me to conduct ward round when he and other senior faculty member would join me on rounds. It was a lesson to respect and promote a junior colleague. Such a behaviour builds a close bond between one another. Dr Wagle addressed every human being as a gentleman, irrespective of status. It was only such role models that made it possible for us to learn art of interpersonal behaviour in medical practice. I have tried to emulate my chief as much as I could throughout last 50 years of my professional career and I hope this legacy is passed on at least to few students.

What is appalling is lack of comradeship that starts right from training days. Five decades ago when I was a trainee, there was not only cordial relationship between students and resident doctors but also with faculty members who were our friends more that our teachers. Thus, we were closely

knit. Over last one decade that I have experienced during my tenure as Medical Director of a teaching institution, that there is no comradeship between first, second and third-year residents as each junior addresses his one-year senior as “sir or madam”. I feel it comes in the way of building relationship and thereby affects smooth working together.

Self-regulation – need of the hour

There is no doubt about the role played by role model to promote good conduct. However, role model can’t ensure good conduct unless one is motivated enough. Ethics is internally defined based on motivation while morals are externally imposed. Motivation is a psychological driving force that reinforces an action towards desired goal. Intrinsic motivation driven by enjoyment of work – pleasure without expecting reward – must come from within that has positive impact on life. Once intrinsic motivation gets started, habit sustains it. On the other hand, extrinsic motivation is driven by reward, money, threat or punishment and it has negative impact on life. While motivation leads the way, it is attitude that decides how well you behave. It is the attitude that takes you to altitude. Do you know – when each alphabet is assigned a numerical number in sequence (1 for A, 2 for B), word “attitude” totals 100!

Testing time when faced with specific situations

Few common situations occur in medical practice that really test individual behavior pattern in doctor-doctor relationship.

1. A doctor may be called to attend a patient whose regular doctor is not available. It is important to attend to problems that demand immediate attention, avoiding discussion and offering opinion on other problems for regular doctor to handle. It automatically takes care of difference of opinion if any. Best way out is to reiterate that ideal advice comes from a regular doctor who knows the background health status of his patient. Such an explanation is reasonably acceptable.
2. Problem is tricky when senior doctor is called for second opinion that differs completely from the original. Even if senior doctor is convinced about need to change the diagnosis and / or management in favor of the patient's well-being, it is imperative to defend original doctor's opinion at the same time. It is easy to get away by making a statement "I would have done the same that your doctor did but now that it has failed, we need to change which we both doctors will discuss together and implement". It ensures the right change without damaging primary doctor's image and one could privately sensitise the doctor to correct his faults. This is very important as each doctor has faced similar situation, however experienced he may be and expects not to be fallen in the eyes of his patient. After all, medicine is science of uncertainty and art of probability and no doctor can claim to have made no mistakes.
3. It is not uncommon for patients to seek another doctor's opinion by themselves, without knowledge of primary treating doctor. Many of them may hide information about what was done by previous doctor. In addition, unhappy patient elaborates on how bad the previous doctor was. We

should discourage such a dialogue and surely not comment on it lest it is considered as approval of patient's criticism about previous doctor or even an attempt to defend a professional colleague. It is best to move on with patient's physical problems, cutting short unnecessary gossip.

4. Cross-reference relates to an opinion asked for from one specialist to the other from allied branch of medicine. It may often pose a problem. It is duty of primary treating doctor to discuss with thepatient and his relatives and justify need for a cross reference. It should be clear to everyone concerned whether it is "one time" consultation or "daily" review. It is often a bone of contention when it comes to paying for it. It is much better to be transparent about it. It is ideal that in such a cross-reference consultation, both the doctors together convey unified opinion to the patient. However, if it is not possible for both the doctors to be present at the same time, primary doctor must explain the patient about joint discussion while other doctor should be very brief in talking to the patient and leave details to be discussed by primary doctor. This again would avoid any misinterpretation or misunderstanding on the part of the patient.

5. Biggest dilemma in doctor's mind is whether to protect a colleague in spite of unethical or negligent act or to expose him. Ethically, physician is expected to expose a corrupt, unethical or negligent colleague and it is also moral, social and professional responsibility. However, it may be construed as an act of vengeance by other colleagues. There is a room for constructive criticism. Positive criticism attempts to change medical practice for the better. It is right

to criticize a colleague but face-to-face and only in strict confidence. Negative criticism amounts to fault-finding that serves no purpose than to damage someone's image. One should never malign a colleague. Honest comment offered in good faith is justified but how to do it is most important. Few years ago, one of my child patient's motherdelivered another baby and wanted me to see her newborn at the maternity hospital to which I was not attached. I insisted that due permission should be obtained from treating obstetrician which was done. I went to see the baby by then 30 hours old. To my horror, I found imperforate anus though I was informed that baby had passed meconium. It was obvious a negligence. I had to inform parents about it and also need for urgent surgery and at the same time, I was obliged to protect the obstetrician. I was aware that rarely anal opening is seen as a dimple but there is a small membrane in the proximal part of anal canal that causes similar obstruction to passage of meconium. I explained the parents that as a pediatrician, I could diagnose such a condition but routinely it is not so easy to make out. Thus. I could save the doctor and also saved the baby. I also had to take the surgeon into confidence. I am sure my action is debatable but, in my mind, I acted right. Academic debates promote healthy criticism without naming a colleague, such as, one can present a real story of unethical act for audience reaction. It is likely the guilty colleague could be attending as well but without being recognized and in the process, he has learnt his mistake. I am sure every doctor wants to improve but without being made a villain.

Personal notes

I started private practice in the year 1969 and ten years later, Dr Khare joined me.As another decade passed, we thought of adding another colleague in our group and Dr Chokhani joined around late 80's. By then we were three of us working as one unit, similar to unit system in teaching hospitals with three staff members. Subsequently Dr Pranjal Kale joined us and now we are four together. We share the place as well as patients though patients have a choice to select one of us as their primary pediatrician but are assured of help from others in the group whenever necessary. Interpersonal relations amongst us – all pediatricians - have been so good that only differences of opinion have been restricted to academic discussions and I give full credit to my colleagues. All of us have done reasonably well being together with many advantages of joint practice. This is just to make a point that doctors of same specialty can also work together as one unit, only with mutual trust and faith.

I recall when I met one of my senior colleagues soon after I had started joint practice, he wondered whether my decision was right as I would lose patients to my partner. I realized he had not understood that we were one unit.

Take home message

Basis of good relation between doctors lies in mutual respect and understanding. There are rules of good conduct for doctors – referred as medical etiquettes but they are never taught in medical curriculum. Anyway, they can't be taught in classroom but must be witnessed every day in live situations during training period to have a lasting effect. However,

beyond an exposure to role model behavior, good conduct is self-regulated and all that one needs is motivation and attitude to follow it. Surely it brings joy and happiness in life. Of course, same is true about relationship between any two individuals that we need to learn from childhood through exposure in the family itself.

Chapter 9. Building blocks of patient care

Practice of medicine is an art, not a trade, a calling not a business, a calling in which your heart will be exercised equally with brain- William Osler
What patient needs is more conversation – Glenn Close

Introduction

"Care always, cure if possible" should be the motto of every doctor. In spite of advances in modern medicine, cure is not possible in many diseases. In the past much before modern science developed, physician could comfort patients only by quality of care they offered beyond prescribing medicines. Unfortunately, this aspect often is ignored by present-day doctors.

Attributes of quality care

Quality is an abstract and not a discrete entity. There are two dimensions of health care – provision of care (clinical standards) and experience of care (communication, counselling, empathy, ethics and emotional support). There is no doubt that clinical decisions must be based on science that include analysis of detailed history, focused physical

examination, relevant minimum tests and rational therapy. However, there are other patient-centric aspects of quality care that relate to individual patients' needs, preferences and values, patient education and patient satisfaction. Therapy must be safe (no harm while trying to do good), effective - servicesprovided based on scientific knowledge to all those who could benefit (avoiding underuse) and refraining from providing services to those who are unlikely to benefit (avoiding overuse), timely (reducing undue waits and harmful delays for both care-givers and receivers), equitable (providing same quality as per the need) and efficient (avoiding waste of drugs, equipment, tests, procedures, supplies, ideas and energy). Doctor should give adequate time as per the need and not just the standard time slot for every patient. Some patients may need extra time either for diagnosis or counselling and it is necessary for a doctor to manage time in such a way that quality of care is not sacrificed. Dignified and respectful approach is expected and success of quality care depends on patient empowerment that helps him to manage his own illness effectively.

Holistic care ensures quality care

We humans are endowed upon by nature few faculties that must be put to use in every act of ours to obtain best outcome. These include body, heart, mind and soul. When translated into medical practice, body means knowledge, heart the compassion, mind the commitment and soul the inner conscience. Compassion makes us understand the suffering of a patient which in turn would deliver quality

care. Of course, we should not be too much attached to a patient lest we go astray in our clinical decisions. Commitment is necessary to do the best to the extent of our ability and should be the way you would expect other doctors to behave if you were a patient. As medical science is dynamic and fast changing, we need to keep ourselves constantly updated. However, in spite of knowledge-based care delivered with compassion and commitment may not achieve desired results and it is where inner conscience plays a part. As outcome in a patient depends on many variables beyond our control, even at the end of poor outcome, we should be so clear in our conscience that we had left nothing undone. After all we are answerable to our own conscience.

Thin line between great and good doctor

Good and great are both adjectives that superficially seem to be similar but are different. Great is an adjective that may be used for both good and bad behavior such as “he is a great crook” or “a great liar”. But good as an adjective refers to only right behavior. There exists a thin line between great and good doctor. Great doctor is one whose performance is above average and so is admired while good doctor fulfills the expected or desired outcome including patient satisfaction and gratefulness and such a doctor commands respect. Average doctor treats symptoms, great doctor treats the disease while good doctor treats a patient and beyond.

Is motivation necessary?

Motivation is a psychological driving force that reinforces an action towards desired goal. Intrinsic motivation is driven by

enjoyment of work, pleasure without expecting a reward and should come from within. In such a situation, even work load induces eustress – enjoyable stress that does produce positive impact on health and well-being. Once intrinsic motivation gets started, habit sustains it. As against, extrinsic motivation is driven by reward, money or threat, punishment and in which work load results in stress that has negative impact on life, results in life-style disorders. It is the intrinsic motivation that determines what you do but attitude decides how well you do. It is the attitude that takes you to altitudes. If you give a numerical value to each alphabet – 1 for A and 2 for B, then attitude is the word that totals 100. It is important to cultivate right kind of attitude to reach heights.

Personal notes

I set up a joint practice so that quantity of practice could be shared with a motto to maintain good quality and I could give enough time to a patient with proper counselling and documentation. All my partners do the same. We are blessed by parents who appreciate care that we give and it brings us an immense joy. Of course, few patients want a quick fix and we are happy that such patients never come back to us.
I have met patients who felt I talked more than prescribing drugs and so, they were not satisfied as they thought they wasted their time. Obviously, they don't care for "care" but only value the drug prescription. God bless them to find better doctor!

Take home message

Doctor is expected always to offer holistic care and cure if possible. One must develop intrinsic motivation and right attitude that will help building right blocks of patient care. It will benefit both the patient and a doctor himself.

Chapter 10. Nurturing self

It's not selfish to love yourself, to take care of yourself and make happiness as a priority. It's necessary – Mandy Hale
If your compassion does not include yourself, it is incomplete – Jack Cornfield

Introduction

Nurturing is an act of encouraging, nourishing and caring for someone or something to promote ideal functioning. Nurturing self refers to continued care necessary to maintain good health that is totally in our own hands and for which we are solely responsible. Most of us are lucky to be born with good health but as we move along with our life, we often fail to maintain good health due to sheer neglect. Ironically this is more likely with doctors who look after health of others but are deficient in looking after their own health for various inexcusable reasons. Thus, they often miss out on good health. Good health is not a "divine" gift but needs ideal self-nurture, possible in older children and adults. Younger children require parents to nurture them and set the health in right direction, while older children may need supervision.

What is "health"?

Health is complete state of physical, mental and spiritual well-being and not just absence of disease or infirmity. However, individuals vary in their potential to achieve total health and so one must understand that this definition relates to expected performance commensurate with age and prevalent cultural norms in the society.

Physical health

It is measured by common parameters such as weight, height and BMI – body mass index and should be within normal standard limits appropriate for age, ethnicity and family pattern. It is best assessed by functional competence in terms of energy to perform physical activities. Child during growing periods must maintain centiles on growth chart and an adult must maintain weight within small variations throughout life.

There are five important inputs necessary to maintain good physical health and they include balanced diet (plenty of vegetables and fruits with control on sugar and salt intake), ideal physical exercise (appropriately strenuous for an hour a day), adequate sleep (7-8 hours a day), proper hygiene (skin, teeth, genitalia) and time for leisure and hobbies that rejuvenate for better performance.

Mental health

It consists of emotional (empathy, coping up with stress, tolerant and remaining happy), philosophical (self-regulation, contented, satisfied, work with passion beyond rewards) and social health (socially accepted behavior, build stronger relationship and bonding). Mental health is nurtured during childhood by parents and other family members, further

guided by role model teachers and thereafter fine-tuned and sustained with internal motivation by an adult.

Spiritual health

It has nothing to do with religion but consists of spreading love, avoiding jealousy and hatred, altruism, harmony, concerns about others and trying to help the needy. It is also nurtured in a similar way as mental health

Happiness a part of good health

Happiness is not included in the definition of health but I feel it is the **measure of maximum health.** Happiness is a state of mind and complete health can be nurtured only with harmonious relationship of body with mind. "Mens sana in corpore sano" – meaning healthy mind in a healthy body -is an emblem of Grant Medical College in Mumbai – my alma mater - third oldest medical college in India started in 1845 and this emblem is so apt to sensitise medical students starting their career. Meaningful life is be useful, helpful, compassionate and be blessed and daily acts of such kindness add up to happiness. Happiness is a spectrum of satisfaction, contentment, joy and bliss that results when you appreciate what you have. Happiness is different from pleasure that is transient and felt only by a single organ but happiness pervades through entire body and gives you long lasting experience. It is also different than success that is based on reward, recognition, position or power and is what is perceived by others. Both pleasure and success do not give happiness. General obstacles to happiness are desire, anger, greed, ego, hatred

and attachment. When translated into medical practice, causes of unhappiness include getting into “rat race”, deperonalised approach to a patient, lack of holistic care resulting in patient’s dissatisfaction, increasing stress to the doctor in addition to, poor life style and burnout. It is one’s motivation that decides what one wants to do and the attitude to decide how well to do. Happiness resides in everyone, don’t search outside but be motivated to find it.

Personal notes

Most doctors tend to neglect their own health with an excuse of busy practice. My teacher always said that busy people had enough time because they knew how to manage time. Our joint practice has given me time for my own health. It takes just an hour to work out each day that is just 4% of daily time. Same is true about disciplined eating and sleeping time. It has made my life healthier and more enjoyable.
I always took a break for 10 minutes after working for two hours in my clinic that rejuvenated me. Once a patient who had a next appointment started arguing with my attendant and barged in my room. When he saw me having coffee, he got angry and said “my child is sick and you are relaxing.” I softly told him that I was having coffee to rejuvenate myself so that I could see his child in a better frame of mind and energy and requested him to wait for few more minutes. He obliged and when came in, I told him my break was for his child’s benefit and he apologized.

Tale home message

Every doctor must nurture himself and take care of his own life. Besides maintaining good life style that would ensure physical health, one must give equal importance to nurture mental and spiritual health. However, happiness should be the ultimate aim to boost complete health. Be always grateful for what you have, don't compare with others but compete with yourself to improve. Work hard with passion and share work with others to maintain quality of work. It will give you peace and leisure that makes life enjoyable and boosts health and happiness. Don't forget life has an expiry date. If you nurture yourself well, you will die young but as late as possible.

Chapter 11. Balance in life beyond bank balance

Don't think money does everything or you are going to end up doing everything for money – Voltaire
Everything in moderation is a perfect balance – Ryan Robbins

Introduction

Balance ensures relative distribution to avoid fall. Balance in life is an act that demands attention to multiple activities in order to cope up with all of them in spite of conflicting factors. Life earlier was much easy with happiness and containment. Unfortunately, life has been increasingly complex, competitive and stressful, more so for the doctors. Bank balance provides financial security but does not ensure healthy and happy life. We work and earn only to enrich our

life. Life has many components – physical (diet, exercise, and sleep), mental (stimulation), psychological (success), emotional (happiness) and spiritual (empathy and harmony).

Concept of work-life balance

This concept developed in the western world about 40 years ago and remains mostly ignored in India. Fierce competition, increasing aspirations and modern technology led to ignoring life. Consequences of imbalanced life affected both work and life. After all work is to enrich life and so all of us must define our goals in life clearly and time spent to achieve the same.

Balance in life of a doctor

Two major factors that need balance are related to **medical practice** and**personallifestyle**, each of them consists of multiple components. Both factors are dynamic and changing but highly interdependent. Doctors in general ignore life in pursuit of medical practice and bank balance. Such an imbalance has its consequences affecting personal and family life as well as quality of medical practice resulting in increasing stress and unhappiness. Unfortunately, by the time one realizes effects pf such an imbalance, it is often too late to change.

Balance related to medical practice

<u>Balance between art and science of practice</u>

Medicine is a science of uncertainty and art of probability. Science refers to acquiring knowledge and clinical skills while art consists of ethics, communication, counselling, documentation, time management, dignified and respectful

approach and patient empowerment. One without the other fails to provide holistic care. Every doctor must spend enough time with the patient and art of practice is equally or more important than medical competence and skills.

Balance between practice and updating

Medicine is a dynamic science and change is the only constant. So, we need to learn – unlearn - and relearn. Thus, constant updating is a need and one can learn by priority what is most applicable in practice. Interactive learning is ideal and one can form local groups to facilitate such learning. It is most important to keep updated so as to give the best to the patient and for which time spent is a good investment. It is possible but choice is yours. If you are not updated, check your pulse, you may be academically dead.

Balance between evidence and experience

Evidence and experience-based medicine is an imaginary divide as both are two sides of the same coin. Evidence guides decisions based on averages and not fit for all. Clinical judgment is the key component of evidence-based medicine. So, we need to keep balance between evidence that is based on external research and experience based on internal expertise, one without the other is not desirable.

Balance between traditional wisdom and modern science

Much before modern science developed, traditional wisdom helped to comfort patients. While modern science treats disease, traditional wisdom treats a patient in which resides the disease. Modern science offers a new test or a drug, traditional wisdom decides for whom to use and when to

use. Thus, modern science must be guided by traditional wisdom and we need to use both.

Balance related to life

Balance between profession and personal health

Medical profession goes through three phases. First phase is one of aspiration and expectation, second phase of compulsion and greed for money and last phase of addiction to pursue the same. It is a “rat race”. We have time for patients but not for ourselves. We ignore our own health with irregular eating time, sleep deprivation and lack of exercise. We need to set our goal, regulate work pattern by group practice and create time for many other activities that keep you healthy, happy and still work with passion.

Balance between profession and family

Finding time for family during busy practice is a challenge but possible with adjusting work schedules. Group practice helps to achieve his balance. There are many benefits of spending time with the family such as bonding with family members, nurturing positive behavior, promoting healthy life, relieving stress, imparting good values and improving self-esteem of children.

Balance between time, money and energy

During initial days of practice, one has enough time and energy but no money, when practice flourishes, you have enough money and energy but no time and finally at the end of practice, you have enough money and time but no energy. So, one must enjoy life when you have money and energy and find time even in busy practice. Otherwise, you will

collect money at the cost of health and later, spend all that accumulated money to regain health.

Balance between success and happiness

Success is you get what you want at any cost but happiness is you want what you get or what you need. Success lies in happiness. We must learn to “give” more than “take” because it gets back with more happiness. Success beyond limits “kills” but happiness takes care of your life so that you can die young as late as possible. Don’t forget life has an expiry date that is not known.

Current scenario of medical practice

Rational and ethical practice as well as academic updating is sacrificed in pursuit of money. Burnout leads to long term health problems such as obesity, hypertension, acidity, digestive complaints, depression, anxiety, sleep problems, chronic aches and pains. Quality of practice goes down with patient dissatisfaction and poor self-esteem. In turn, it increases stress worsening health problems and unhappiness. It is at the cost of personal health, family time and happiness. This trend must be reversed and it is possible best at the early phase of practice. However, it is never too late.

Personal notes

I maintain friendly relations with my students. I recall when one of my ex-students and now a busy successful pediatrician told me that I always lacked ambition in life. I asked him why he felt so. He said if I had an ambition to become the most sought-after pediatrician, there would have been large crowd

of patients in my waiting room at my office. I told him that my ambitions were different and I wanted to lead a balanced life with focus on happiness and passion and not just to build a large practice. I am convinced that person who excels in one area is considered most successful by others but he may not be happy because of imbalanced life. Priorities do change in life at different times but emphasis must be on a balance all the time.

Take home message

Set your goals to begin with and balance work and life. It is necessary to develop enough practice but far more important is to enjoy practice and life. It is possible only when you achieve an ideal balance. Final goal of life should be happiness and make life worth living.

Chapter 12. Miles to go ----- before teaching becomes learning

Education is not learning of facts but training the mind to think – Albert Einstein
Student, you don't study to pass the test but study to prepare for the day when you are the only one between the patient and his grave – Mark Reid

Introduction

There is often a slip between cup and lip. Teaching is meant to learn but it may not happen. International program for students' assessment at the age of 15 years has been conducted every three years since year 2000. Results of this

program in the year 2018 revealed that India ranked 72nd out of 73 participating countries. It is obvious that a gap exists between teaching and learning and we need to define this gap and take corrective measures. We must get inspired to make a change and we owe this to the next generation.

What is teaching?

Teaching is a learned activity for students that includes learning for the teacher as well. It is an act of great optimism but it is incredibly complex. It should not be a mere source of information or knowledge that student can obtain even without a teacher. In fact, a teacher is expected to stimulate and equip students to think so they are able to seek, analyse and implement what is gathered. Purpose of teaching is to shape character, caliber and future of students. Quality of future doctors depend on our teaching today.“I can’t teach anything to anyone, I only make them think,”said Socrates.

What is learning?

Learning is a process that starts at 32 weeks of gestation. It is the time when nervous system is primed to start learning. Learning is meant to acquire new information or modify and reinforce existing information. It is not a rote learning but meaningful learning. Understanding information is what is effective learning. Formal conventional learning often occurs through monologue that does not facilitate ideal learning. Informal interactive discussion between students and guided by a teacher is the best way to fulfill the very purpose of learning that is student-centered and not teacher-centered.

Who is a teacher?

Teacher is a person who creates a change that facilitates learning. In fact, one can learn from anyone who fits in the above definition irrespective of his professional status. In medicine, patients are the best teachers who suffer so that we can learn from their sufferings. Paramedical staff including nurses and ward boys as well as senior resident doctors can be good teachers and senior students can teach a junior student. In fact, formal designated teacher learns from students when they ask difficult questions. Even “dead” can teach as postmortem often reveals what was missed. I recall having learnt from a ward boy how to place the patient in the right position when performing a lumber puncture and from a nurse how to give an enema. Thus, there are opportunities to lean all the time only if we wish to learn – age and time is no bar and this is the need for every doctor to keep learning as medicine is dynamic with change being the constant. Thus, doctor is always a student and it is true for every teacher as well.

Types of teachers

Unfortunately, we call an individual a teacher only when he is designated or authorized or supposed to teach. Naturally every one of us must have met different types of “teachers” right from school, college and elsewhere. In general, there are three types of teachers. First type of teachers were those who “were in our school or college”, second type were those who “taught us” but third type were those “from whom we learnt” Ihave a fond memory of third type of teachers and I

am forever grateful to them. It is said that mediocre teacher tells, good teacher teaches, excellent teacher demonstrates but outstanding teacher inspires and motivates.

Quality of an outstanding teacher

A teacher must have good knowledge, competence and communication skills but equally important are factors like passion, perseverance, aptitude and attitude. He should be able to foster clinical thinking and cultivate curiosity, inspire hope, ignite imagination and instill love for learning. A teacher in medicine must deliver clinical facts (science) but also address human facts (art). It is a philosophical exercise besides biological one. He should develop sense of responsibility and ethical standards in students to fulfill Hippocrates oat. Of course, he has to be a good human being – honest, sincere, accountable, empathetic, and patient and above all a good listener.

How does an outstanding teacher teach?

He makes learning process interesting to engage attention of students. He does not simply impart factual knowledge but explains intricacies involved in a topic under discussion. He is able to make difficult problems simpler by giving examples in real life that students can easily grasp. He promotes interactive discussion amongst students so that every one learns. He scrutinizes own performance through a feed-back from students.

Is “teacher” born or made?

I am not sure whether it is a “natural gift”. However, even if one is gifted, it needs refining with continuous learning because “gift” may otherwise remain dormant. Australian professor John Hattie in his book “visible learning” says teaching is an art any one can learn for which one needs four psychological assets – interest, practice, purpose and hope – to achieve success. Interaction is the key and role model is an integral art. Practice makes one perfect but it has to be a deliberate practice that is effortful, mistakes-ridden and repetitive. What it means to a teacher is to observe own mistakes and employ special efforts to correct them. It leaves a question to ponder whether teachers need formal training.

Personal notes

Besides excellent teachers from whom I learnt both art and science of medicine, I recall several others, though not designated as teachers, who taught me medicine and different aspects of life. As mentioned above, Rajaram was a wardboy who taught me first hands-on lesson in performing lumber puncture in an infant. Our ward sister-in-charge showed me how to give an enema to a child. I have formed an organsation called “clinical pediatrics” for teaching of medical students free of costwith the help of my colleagueswho have taught me a lot as each one of them excel in one way or another. They are all practicing pediatricians and not formally designated teachers but teach with enthusiasm and passion.Finally, I continue to learn from my child patients and so I have dedicated all my books to “children who suffered so that we could learn”. Of course, I

owe to my parents and school teachers for inculcating good values in life. I recall a school principal who told me that if teacher alone talks in the class, no one learns but if students talk in the class everyone learns. What he preached was learning through interactive discussion and not monologues. We have been following the same in our teaching sessions.
A doctor looked perplexed while viewing laboratory reports and so, patient asked whether there was anything serious. Doctor said “Not sure because I had left this part of study in option.” Study of medicine continues through life and no portion can be optional.
One of my undergraduate students had asked me why they had to study many subjects but each subject was being taught by different teachers, why not from same teacher? He had a valid question. I explained to him that each specialistwas able to explain intricacies better in his domain. I pondered with his question that also emphasizes that every teacher in medicine should possess basic knowledge.

Takehome message

Teaching is a noble profession. We need to promote it.Focus on quality is a key factor and quality assessment tools must be in place so that teacher’s performance is monitored. Students must assess teacher’s performance as well. System must offer opportunities to passionate teachers wherever they may be even if they are not designated as teachers. It will benefit all. High performing educational systems in the world select best teachers and look after them well. They

must be paid as per their performance. Only then best teachers will enter teaching profession.

Chapter 13. Art of communication and counselling

He that won't be counselled can't be helped – Benjamin Franklin
He was a patient with a diagnosis that he could not understand – Maggie Stiefwater

Introduction

Communication and counselling are essential skills that every doctor must learn. It is a key to success as it instils confidence in the mind of a patient and improves compliance and thereby also recovery. Communication and counselling are not the same. Communication refers to meaningful information while counselling goes much beyond it.Good communication skills are a prerequisite for effective counselling. Counselling is not mere information but should provide professional help, assistance and guidance to resolve problems and difficulties that would make it easy for patients to face the situation.

Basics revisited

Communication and counselling should be accurate, brief and clear, preferably documented, relevant to individual situation and needs, must avoid complexity by using simple language that lay person can understand, ideally by giving simple examples of day-to-day experiences. Courteous behavior and empathy are most essential components of

counselling. It is important to read the mind of a patient and his relatives and address their concerns. Every patient would like to know about the disease – what is it, why did it happen, which tests are necessary, how would it be confirmed, how would it be treated, options available for treatment, safety of drugs and their side-effects, expected outcome, suffering and disability, time frame and cost of treatment. Communication offers relevant information and counselling takes care of hidden factors such as anxiety, worry, uncertainty, frustration, self-pity, self-blame etc by empathetic approach, giving support and confidence. Patient must feel that his doctor is with him to guide and help to face the situation.

Varied situations requiring counselling

Every patient must be counselled relevant to his needs. However, physician is faced with many situations in practice that requires counselling at different levels. Rational practice during routine outpatient service, chronic diseases requiring good compliance, chronic functional disorders, disabilities with permanent handicaps, worsening conditions are some of the situations that need relevant counselling. But, most challenging situation for counselling is uncontrolled outbursts of anger and agitation by the relatives of patients that may lead to violence.

Counselling in office practice to ensure rationality

It is often not possible to arrive at a provisional diagnosis on first visit. Rationality demands that patient is advised to “wait and watch” without specific therapy till diagnosis evolves. It is necessary to ensure and convey safety of “wait and watch”

by giving proper instructions to monitor danger symptoms and if observed, report immediately. We may have to explain dangers of empirical therapy and futility of ordering investigations at random. It is most important to document short summary of the problem along with advice given that ensures legal safety. Most appropriate action taken by a physician but if not documented, is not accepted as evidence in the court of justice.

Counselling for chronic conditions to ensure compliance

Many chronic diseases remain incurable but can be controlled to an extent to maintain reasonable quality of life. However, it is possible only with patient's compliance to follow advice given by the doctor and for which adequate counselling is required. Most patients default on advice once symptoms disappear, wrongly considering it as control of disease and fearing side effects of drugs. Besides, there are often "well-wishers" who advice to stop medications on feeling better. We need to emphasise on safety of long-term use of drugs and also dangers of non-compliance that may end up with worsening condition necessitatinga greater number of drugs for longer duration. We must discuss periodic monitoring strategies and of course document the same.

Counselling for chronic functional disorders

Functional disorders are on the rise even in children. It is important to realize that symptoms of such disorders are genuine even in absence of organic disease and are triggered by multiple factors such as home / school environment,

stress and individual personality. The disorder presents with varied symptoms mediated through the mind. Abdominal pain is a common presentation of such a disorder as a result of gut-brain functional axis. We need special skills to convince the patient / parents of a child about the nature of the disease, lack of laboratory proof, diagnosis based on circumstantial evidence and management depending not much on drugs but participation from entire family and not the patient alone. Counselling should start with a discussion about organic disorders responsible for the symptoms and rule them out one by one before suggesting the role of mind over the body. We often meet denial to accept such a diagnosis from patients and parents and hence counselling in such situations becomes a challenge. We should be careful not to suggest malingering that is different than functional disorder. Patience and empathy are the key factors in counselling of such disorders and multiple counselling sessions may be necessary as improvement may be slow.

Counselling in case of permanent handicap

Many chronic disorders end up with some permanent disability. Patient or parents often feel guilty, blame others or curse destiny. We need to remove such feelings and induce positive thinking to focus on retained functions with best of the efforts. Proper explanation of real situation is necessary but without undue hopes or despair. It is important to emphasise that every handicap can be overcome by compensatory mechanisms. For example, if a right-handed person loses his right hand, he can learn to work effectively

with left hand and if one loses both the hands, there are persons who could learn to use toes as fingers. Such things are possible only with determination and best efforts by the handicapped individual under the guidance of an expert. We must encourage and support rehabilitative measures and not forget that for such individuals, we are the last hopes. We need to be empathetic to do our best.

Counselling when faced with a dying patient

This is the most difficult part of counselling. We need to prepare the relatives for the inevitable but the process should be slow and smooth not to give them a sudden shock. They do sense the grave situation but still harbor a hope. We must inform them real situation of poor response to treatment but add that one has seen improvement even at such a worsening stage and assure them that everything possible is being done. It is ideal to allow within limits two or three close relatives in rotation to witness efforts being put in. We must communicate with relatives every half an hour and answer all questions that may be asked repeatedly. During counselling sessions, we must be careful to phrase statements in a way that they are not misinterpreted and it is best that only one person counsels them. Patience and empathy are the key factors for successful handling of such a crisis. It is best done by senior-most doctor in charge of the patient and not left to juniors.

Counselling when faced with angry and agitating relatives

This is a tricky situation that calls for remaining calm avoiding arguments and allowing the relatives to vent out their

feelings without interruption. Patient hearing of their complaints is likely to reduce the tension a bit. We must not vehemently refute their allegations but must be tactful. We must say that we do understand their concern but explain them the correct view of the situation. We should not try to appear defensive but demonstrate confidence in handling the situation without instigating them. Don't forget, such a situation often results from lack of communication and counselling and should be mostly avoidable.

Personal notes

I learnt the counselling skills during my training by observing how my teachers talked to patients and their relatives. I realise that it is possible to explain most complex disease in simple lay language. I give examples of real-lifesituations which are similar to their own medical problem. I was counselling the parent of a child with neurodegenerative disorder. I told them that as one gets older, many functions such as hearing, memory, body balance, speech etc. start getting impaired, this is called degeneration. It occurs in adults anytime from 60 years onwards but may also start occasionally bit early. However unfortunately, such degeneration started in their young child at an early age. But as degenerative impairment cannot be corrected with medicines, one has to adapt to such situations with relevant help from gadgets and supports. Explaining with such similarities, lay persons understand even the most complicated medical problem such as neurodegeneration. It is the art that each doctor must develop.

I recall mother of an infant who was instilling oral anti-cold medicine into nostrils. When she found it difficult, she phoned her doctor, who advised her to instill the same with dilution with water, to which she reported it was impossible. At that time, doctor realized that she was instilling oral medicine into nostrils. When reprimanded, doctor was blamed for unclear instructions as he had not mentioned it was for oral use. Even simple facts should not be taken for granted and clear instructions must be documented. Patients often make mistakes about formulation in drops and syrups as concentration is so different and may be harmful if one is mistaken for the other. I have known rectal suppository for constipation being swallowed orally. Other issue is poor handwriting of most of us. I know about a pharmacist giving Ascabiol (anti-scabies medicine for local application) instead of Ascoril (oral cough remedy). It may be ideal to write name of drugs in capitals or better is a digital print-out.

Take home message

Counselling is an art that is not taught in medical school but must be learnt by observing a role model and improved by experience. Communication and counselling are as important in practice as knowledge and competence. It is equally important to document every action that serves as evidence. Problems arise when we don’t follow these norms.

Chapter 14. How to keep updated in busy medical practice?

To improve is to change, to be perfect is to change often – Winston Churchill
If change is constant then learning has to be continual – Meir Liraz

Is there a need to keep updated?

Medical science is dynamic and only constant is the change. Diseases caused by hitherto unknown organisms have come to light while well controlled older infections surface again. Large number of drugs are available and it is difficult to keep track of them. Vaccines were administered only to children but now they are also recommended for adults. Newer modalities of investigations are now in vogue and several new techniques of management are being practiced that include interventional procedures and organ transplants. Add to all these advances, we are now witnessing a surge in life style diseases with increasing incidence of obesity, diabetes, hypertension, coronary artery disease and strokes. So, the profile of disease pattern is changing fast and every doctor is going to meet these challenges, hence the need to keep updated.

How to keep undated?

It is impossible to learn everything that is new and it is also not necessary. One may have to be selective. We must make a note of problems that are more prevalent in our day-to-day practice and focus on updating in those areas. We must know recent advances in those areas so that we can offer the best to our patients. There are several sources of updating. Print or digital source of information is easily available. One may

choose articles that are likely to be useful in your own practice and ignore other articles. This can be done at convenient time and it is possible if one plans it well. It is said that most busy persons have enough time as they plan their time well. Another source is attending CMEs. It is mandatory for every doctor to earn credit points by attending CMEs. One can again choose where to go and what to listen. It is not mere physical presence at such CMEs and you don't attend just to get credit points. During CMEs, it is important to make notes of information that you sensed useful in your practice. However best way to keep updated is to discuss a problem faced by you with someone who knows – such a doctor could be a specialist or your own senior colleague. It is ideal to form a voluntary group that meets periodically to discuss problems and try to solve them together.

When practice is flourishing, is there a need to be updated?

Patients will keep on coming to us not because we know best but because they have faith in us. They presume we would be doing our best and it is not possible to do best without being updated. It would amount to cheating if we don't do our best because of lack of latest knowledge. This is bitterly felt when one is called upon to treat our own relation. Ofcourse, one can always get the best help from someone else for our own relation. But I am sure every patient of ours deserves the same from us and we are morally responsible for it. It is important to know what we know and also what we don't know but many times we don't know what we don't

know. It is said that ignorance is a bliss but it is not true in medical profession as we deal with life

Do you need motivation to keep updated?

It has to be an internal motivation that resides in your own self and you need to kindle it. You would get a thrill when you diagnose an uncommon condition and cure the patient. Such instances make routine practice satisfying and enjoyable. Once you are motivated, it becomes a habit that is sustained throughout life. It brings happiness in your life. So, start today if not done before. It is never too late. Read every day about the problem that you faced and I am sure there are problems every day. It may take just half an hour to know more about it. If you update in one problem a day, you would be the most updated doctor. If you don't keep updated, please check your pulse, you may be academically dead.

Personal notes

During my residency in Pediatrics, I witnessed how Dr P.M. Udani would keep himself abreast with latest knowledge. He used to be a voracious reader and had large collection of books, vacant space on each page of his books was filled with his own notes. He could do it in spite of spending 8 hours a day at J.J. Hospital and 3-4 hours a day at his clinic. Teaching is the best way to learn and I was lucky to be appointed as honorary teacher in Grant Medical College. I used to spend four hours a week in college library and make relevant notes to be filed systematically for easy retrieval. Those days, we did not have computers or note pads. Over years it became easy to store notes electronically. Each time,

I saw a difficult problem, I would search the answer in my notes or on other digital sites and then store newly acquired information on separate file. Updating is not only the need and it has also become easy now at the finger-click.

Take home message

Try to be selectively updated in areas that concern your practice the most. Invest just 2% of your daily life (half an hour a day) to keep updated. Be internally motivated to do your best, it brings happiness.

Chapter 15. How to be rational in practice?

Rational man is guided by his thinking, by a process of reasoning, not by his feelings or desires – Ayan Rand
Rational practice is to be taught not in a lecture hall but at the bedside of patients where it is applied – Robert Owen

What is rationality?

Rationality refers to judicious and well-reasoned sensible use of resources to offer quality service. Judicious use of resources in medical practice simply means minimal intervention (investigations and drugs) to get maximum benefit (cure if possible, comfort always). Quality service in medical practice implies holistic care. Holistic care is possible with use of all modalities endowed upon humans by nature – namely body, heart, mind and soul. When translated into medical practice, body is knowledge, heart the compassion, mind the commitment and soul the conscience. If it is done with devotion – love and loyalty, it becomes divine - coming

from supernatural powers and it is so sacred that helps ultimately the healing.

Medicine and rationalism are inseparable.

Medicine is the most touching science of all – it involves healing, caring, soothing, reassuring, understanding and offering hope. Medical practice should be a perfect combination of science and art. Rationality of science involves detailed history, keen observation (it is well known that eyes don't see what mind does not know), focused physical examination, objective reasoning and analysis, introspection and learning from own mistakes. Rationality of art includes empathy, compassion, communication, counselling and documentation. It is only when judicious use of science and art is combined that rationality is served.

Universal pitfalls in medical practice

There is not enough time spent on detailed history. Proper information is not sought because of lack of time – it is an excuse. Whatever information is obtained, it is not analysed and interpreted due to lack of thinking. Once this habit is lost, thinking itself becomes a disuse atrophy. This leads to unfocused physical examination likely to miss abnormal findings. It sets in a vicious cycle of unnecessary tests, empirical therapy often with multiple drugs. It is obviously not conducive to communication, counselling or documentation. This is irrationality at its height. However, ironically, it may still work and gives false sense of competence to a doctor. Unfortunately, patient may not

know about poor quality of service but the doctor should introspect.

How to ensure rational practice?

Care alwaysFor whatever complaint patient may come to you, offer advice on preventive health issues such as growth monitoring, developmental screening including vision and hearing, ideal diet, proper hygiene and life style.
Use clinical skillsTry to arrive at provisional diagnosis by analysis of detailed history and focused physical examination. Order investigations only after provisional diagnosis and that too if necessary.
Be a good listenerEvery parent of a child or child himself may give you a clue to a diagnosis only if you care to listen to them carefully and allow them to express what they wish to say. Most illiterate persons also know enough to express though one must have a skill to get relevant information and to filter out what is not relevant.
Test a testBefore you order a test, think what way such a test would help you to arrive at a diagnosis. Don't order a test because you don't know probable disease and if so, then you also don't know which tests to order. **There are no routine tests.**Be a rational prescriber
If you don't have any provisional diagnosis, decide whether it is safe to wait for disease to evolve. Empirical therapy is justified only in serious situations and that too after ordering relevant tests. Prescribe minimum number of drugs. Symptomatic therapy is necessary only if symptoms are very discomforting to a patient and that too it should be

employed only at the time of intolerable symptoms. This should be explained to the patient and left himself to decide when to use. Doctor should not advise the timing of such symptomatic therapy, though frequency has to be limited. Communicate, counsel and documentInform patient about his illness and therapy in simple words which improves compliance of treatment. Counselling is an art that guides the patient to go through his illness which instils confidence in a patient. Document in brief relevant facts that signifies transparency and accountability. It also helps to be legally safe.

Choose your own way

You have to set your own goals in practice and pursue them. Let your goals be professional credibility, peer acceptance and social respect. To achieve this goal, be rational in practice and once you adhere to rationality, it becomes a habit that is sustained throughout life. It may take time to begin with but spending time for rationality is worth. It leads to happiness and promotes your own health.

Personal notes

I formed a habit of documenting my provisional diagnosis with supporting facts that ensured rational drug prescription and advice. Even when I could not come to any provisional diagnosis, I would mention “no clue to any specific diagnosis” and add “it is safe to wait and observe any new symptoms and inform”. I would end with “no specific medicines except symptomatic therapy”. Such a commitment was accepted by most patients as it signified not only honesty but also

confidence and it helped me to be rational in my approach. This is the best way to inculcate rationality. Unfortunately, most prescriptions contain only the drugs without any preceding justification and hence rationality is never monitored.

Once a parent of my patient requested me to see their neighbor's child for whom their pediatrician had prescribed an antibiotic. When I saw the child and confirmed the need for an antibiotic, child' s parents exclaimed saying "Oh, you also write an antibiotic" because I had never found the need to prescribe an antibiotic for their neighbor's child. They thought antibiotic use is irrational. Such beliefs must be countered and corrected. Rationality can't be stretched to irrational level. One of my junior colleagues said that if everyone around him prescribed an antibiotic without reason, he could not afford to be rational. I told him a story. There was a vasectomy camp in a village where every eligible person underwent the procedure. When organisers were about to close down, an old man of 80 years came in and wanted to undergo vasectomy. He was told that he did not need it. He explained "if any lady got pregnant in the village, he would be blamed" Old man had a valid pointbut it should not apply to medical practice. Hence practice rationally, it will give you happiness and community will recognize it eventually.

Take home message

Rational practice is possible if you set your goal to achieve it. It does not take time and with repeated practice, it becomes

a habit. It offers satisfaction to a patient, happiness to a doctor and promotes good health in both.

Chapter 16. How to enjoy medical practice?

The best way to enjoy your job is to imagine yourself without one – Oscar Wilde
When you enjoy what you do, work becomes a play – Martin Yan

What does the word “enjoy” mean to you?

Enjoy means to receive joy while joy isa feeling of happiness and cheerfulness. In order to enjoy, one has to act before you experience joy. Thus, enjoy is an action, joy a feeling, an outcome of enjoy. Joy is a momentary but intense feeling of positive emotions. Such little moments experienced repeatedly lead to happiness. It is clear that joy is not dependent on external influences, it resides in your own mind that needs to be exposed and perceived by your own action. When mind is pure, joy follows like a shadow that never leaves, said Gautam Buddha. Joy is the emotional dimension of life that is well lived. Once you experience joy with your own action, in turn, whatever you do with joy will make you enjoy further. This cycle will continue and sustain as a habit. Joy has one characteristic – once you feel joy, you will strive for it again and again. Secret of joy is contained in one word – “excellence” and to know how to do well is simply to enjoy what you are doing.

Medical practice is stressful

Medicine is a science of uncertainty and hence doctors use art of probability to arrive at a diagnosis. Every individual reacts differently to same disease and even same individual responds differently at different times to a same disease. However, patient expects best outcome irrespective of several variables that are beyond control of a doctor. Stakes are high as minute error may result in major consequences. In no other profession, risk-outcome ratio is so screwed. Teacher is not expected to produce good results in every student and is not held responsible for failure of student. But doctor is expected to "cure" every disease, otherwise held accountable for the result. Every other professional can think over time and decide best possible action whereas medical practice demands "thought in action" – you think and act at the same time. Hence it is natural that medical practice is quite stressful.

What are the compounding factors to stress?

Besides undue expectations from patients, burnout (60-80 hours a week with forever "on call") leading to physical and emotional exhaustion, alienation from personal life and peer pressure are other factors responsible for stress. However, we need to realize that stress is inappropriate or exaggerated response to situation that may be beyond your control but we need to modulate it to a tolerant level so that it has no negative impact on our work as well as life. It is possible with deliberate practice and meditation helps to destress. If unduly stressed, our performance goes down resulting in more stress. One can understand anxiety when you face

serious situation – anxiety is the appropriate response and has a positive impact on outcome.

Can you enjoy medical practice in spite of stress?

Don't forget that you have chosen to be a doctor and now let your life be well lived as a doctor. It is in your hands. No profession is all roses and even roses have thorns. So, we need to enjoy fragrance of our profession, coping up with thorns. There is a silver lining to our profession. Medicine is the most touching scienceas it involves caring, healing, soothing, reassuring, understanding and offering hopeswith empathy, compassion, commitment, communication, counselling and documentation. This represents art of medical practice and is as important as science. One without the other falls short of desired outcome. Many of us have lost touch with this reality, ignoring how valuable it is and not cultivating it. Patients don't care about how much you know but they want to know how much you care. If you follow art of medical practice, care that you take becomes evident and even poor outcome is accepted as a part of destiny. As doctors, we are aware that disease heals not just because you chose the treatment right but also because patient responded correctly. It is not rare that correct diagnosis and ideal treatment fails to cure a disease. However, when we do our best and patient gets better, it brings joy to a doctor and much more so if difficult problem is solved rationally, it gives a thrill. Good deed is remembered by patients and as a doctor, every one of us have experienced it. So, if you do your work well, you will enjoy medical practice. It is possible.

How to ensure you enjoy medical practice?

“Care always, cure if possible” is our motto. Let us accept that perfection in medical science is impossible but it is possible in art of practice because it is entirely in your hand. Start practicing “holistic” care by using all the faculties endowed upon human beings by nature namely body, heart, mind and soul. When translated to medical practice, body refers to knowledge, heart to compassion, mind to commitment and soul to your own conscience. While knowledge is important, other three domains are most vital. Medical science is developing fast and one needs to keep updated. I have dealt with this issue in one of thearticles. Try to see the problem from patient’s perspectives and you will be compassionate. You must feel the pain that patient experiences though you should learn not to suffer from this pain. Commitment should be at the level when you are treating your own relative. And finally, whatever the outcome of treatment, you should be answerable to your own conscience that you did utmost whatever you could. Be humble, don’t run down peers and follow ethics. Such behavior results in peer acceptance, respect in the profession and faith amongst patients. Once you follow these principles, there will be abundant joy in medical practice.

Balance beyond bank balance

Besides art of medical practice, don’t forget balance between profession and life to remain healthy and enjoy practice as well as life. Don’t go after bank balance only because it may provide financial security but not ensure healthy and joyful

life. Most doctors ignore health due to irregular eating time, lack of exercise, sleep deprivation and “rat race” in practice. Train yourself and your patients in such a way that you are able to look after your personal life. One ideal solution is to establish group practice so that you can modulate your work as well as personal life. You must find time for the family and take a break from practice. There can’t be any excuse about busy practice as most busy people are never short of time because they manage time well. Develop some hobbies that can distract you from stress and makes life enjoyable. Finally learn to balance between time, money and energy. When you start practice, you have time and energy but no money, at the peak of your career, you have money and energy but no time and at the end, you have enough money and time but no energy. So, enjoy life as much as you enjoy practice. When you have money and energy, find time to enjoy life.

Personal notes

One of my colleagues once told me that he had started enjoying practice ever since he started making and documenting a provisional diagnosis and to find that it was subsequently confirmed by relevant teststhat gave him a thrill.He continued to do so in every patient that made him learn that every patient was different even when suffering from same disease. That is how he started enjoying his practice and looked forward to attend the clinic. It is the best way, otherwise practice becomes monotonous and stressful. I started a group practice as work load increased and every ten years, one colleague joined our group. We are now four

in our group. It has given me and my colleagues time to enjoy life. Besides practice, we all spend time in voluntary teaching that is another source of joy and repeated joy brings happiness.

Take home message

Medical practice is stressful but turn this stress into an enjoyable stress –eustress. Follow the art or medical practice to ensure “care always, cure if possible”. Avoid burnout and learn to balance between work and personal life. Manage time so that you can devote attention to your own health and family besides practice. You cannot enjoy practice without enjoying personal life. Manage time, energy and money well. If you follow this, you will look forward to work and life every day.

Chapter 17. How to find time for the family?

Time is free but it’s priceless, you can’t own it but can use it, you can’t keep it but can spend it, once you lose it, you can’t get it back – Harvey Mackay
If you are too busy to enjoy time with your family then you need to evaluate your priorities – Dave Willis

Family – our first responsibility

As a doctor, we owe a lot to our family. To begin with, we got higher education thanks to our parents who often struggled to make it happen for us. Besides education, we learnt culture in the family, value of sharing and “give and take”, only because parents and extended family were available for guidance, support and encouragement. They were there in situations of despair and difficulties. Such a background stood good during subsequent life. After marriage, it was our spouses who made us comfortable and looked after our children even in our absence. Role and contribution of each doctor as parent is paramount for ideal growth and development of children, more so in nuclear families. It is our responsibility and it is our family’s privilege. Hence there is a need to find time for the family in spite of busy practice.

Concept of time management

Time management is the key to efficient working. It is ability to use time more productively, more output in lesser time. It is the process of organizing and planning how to divide your time between specific activities, ensuring right time for right activities. It helps fulfill all responsibilities. One can achieve a lot, if time is managed well which in turn reduces stress and enhances our achievement. Everyone has 24 hours available each day but some can function effectively only because they manage time. Key is not spending time but investing time.

Work–family balance beyond bank balance

Surely bank balance provides financial security but it does not translate into personal and family health and happiness. Both are equally important and so we must strike a balance.

In initial days of medical practice, doctor has enough time as practice takes time to build and, in this phase, there is enough time to spend with family. It brings in happiness forgetting stress of waiting for patients. Problem surfaces when practice builds and with increasing work load, family is ignored. Not only family is ignored but personal health is also at risk because of burnout. This is also the time when children are in formative stage of development and they need proper grooming. We must decide how to strike a balance at this stage and it is possible. Once you miss this phase, habits die hard and as one gets senior, you are likely to continue the same way. However, it is never too late.

How to find time for the family?

Every one including all professionals work as per “office time” with weekly holidays. But doctors work all the time that is most convenient to patients which happen to be most inconvenient time for their personal life. Besides they are available at any odd hours. If banks and post-offices work at the same time that students are in school and parents at their work, still people manage their banking or other needs and find time for the same. Well today in digital revolution, you can do banking from home but it was not so all these decades. If someone is not well, obviously he or she is likely to be at home and so can visit a doctor during “office time”. In all western countries, doctors work at their own schedules and it is possible because they have developed “group practice”. I feel it is the best way to practice that offers ideal work-family balance. I say this with confidence because I

started group practice within first few years of solo practice. Today we are four pediatricians working together with ease and comfort of working without stress and time to look after our personal and family life. This is the best solution. What you lose by way of less income, you gain by far more happiness and sound health. Other solution is to restrict your work and direct it to your juniors so that juniors are happy and you are also happy. Many times, I hear that doctor feelshis patients can't do without him but what is true is patients need to get better irrespective of who makes them better. Those patients who have faith in your competence will also find the same or even better with other doctors. You can recommend right doctor for them and patients will be grateful to you and so you will be happy with your family.

How to spend time with family?

Spending time with the family should be investing in time for creative activities rather than only worldly pleasures. Doctor can make himself available at the time of dinner where all family members dine together. This is the time where everyone speaks about how the day went. Children can narrate what funny thing happened in school and you can tell them a story related to how patient behaved. It becomes interesting and children learn to think and speak. Most important, everyone looks forward to this event and time is not wasted to discuss how children misbehaved. This is an enjoyable time spent most effectively. Age-appropriate discussion during such time makes it more interesting and time well invested. If such a thing is not possible every day, at

least try to make it few days a week, surely on holidays. Of course, there would be other pleasures offered to children and family such as dining out or going for a movie but only selectively. In fact, I know few doctors who take off on one mid-week evenings in addition to weekends.

Hazards of not spending time with family

In today's fast and wicked world, it may spell a disaster. Lack of communication leads to poor bonding. Children are left to themselves and remain unmonitored. You are most likely to offer them worldly pleasures that they would ever long for more and more. You do it as a guilt feeling of having not spent time with them. This sets them on a wrong path. They are likely to suffer because of such upbringing and it could be irreversible. I see increasing prevalence in psychological problems and obesity in children. Junk food, lack of physical exercise, addiction to electronic gadgets, sleep deprivation and often loneliness at home are spoiling children.

Personal notes

During my earlier years of practice, I had to spend entire day out of home as I spent 4-5 hours a day at J.J. Hospital as an Honorary Professor and equal time for private practice. But once I settled in practice, I started a joint practice with one of my ex-students and every 8-10 years, one more Pediatrician joined our group. Over last 10 years, we four practice together as one unit and it gives all of us time for our family and to pursue other hobbies. In spite of initial struggle that kept me busy, I have been lucky not to miss a single occasion when my presence in the family was necessary.Every ten

years, I started reducing my clinic hours to find more time with the familyand it was possible only because of group practice. In fact, during formative years of our children, we need to spend time for them. It helps bonding that lasts for ever.

Take home message

Don’t give an excuse that you have no time because you can always find time only if you understand dangers of not doing so. Money can’t buy health and happiness. While money and professional satisfaction are important, far more vital is personal and family’s health and happiness. You did well because your parents spent time at home and at the same time, made available whatever was needed. Remember worldly pleasures can’t replace time spent with the family.

Chapter 18. How to be legally safe in medical practice?

Many doctors don’t need laws to tell them to act responsibly, few others try to find the ways around the laws - Plato Only thing more dangerous than ignorance is arrogance – Albert Einstein

Moral duties of a doctor

Hippocratic Oath developed 2500 years ago by Greek physician who laid down moral principles of conduct for doctors. WHO developed Geneva Declaration and Medical Council of India brought in an act that has been amended few times as per the need with changing medical practicescenarios. It has widened the scope of expected

conduct of a doctor. Every doctor is bound by such rules to follow medical ethics. Its main pillars are beneficence (do good), non-maleficence (do no harm), autonomy (patient's right to make independent decisions), confidentiality (information communicated by patient is in confidence and should not be shared with others without patient's permission), justice (equality of rights, fairness and morality). Medical Council Registration is an agreement to follow these rules and so we are all bound by the same.

What is expected of a doctor?

Every doctor is expected to act with reasonable care and skill appropriate to the standards set up by professional bodies. Standard of care varies as per the qualifications, experience and environment in which doctor practices. Irrespective of these variables, each doctor is expected to offer "care always, cure if possible". Care involves action with empathy, concern for the patient, communication, counselling and documentation besides time management, good conduct, honesty, transparency, not to hide ignorance and not to run down peers.

Evolution of legality in medical practice

Ethical standards are based on human principles of right and wrong while legal standards are based on written law. Moral principles were set up by the community and every doctor was expected to follow the same in order to offer the best to a patient. It was left to individual doctors to follow and generations of doctors followed the same, till recently. However, with changing scenarios in medical practice, few

doctors strayed away from moral principles that made the Government of India to bring in Consumer protection act in the year 1986. According to this act, dissatisfied patient may complain to consumer forum at local level and if not satisfied with outcome, may go to state or further national level. Indian Medical Association protested against such an act but finally it was implemented. It became necessary only because of few doctors not following moral principles laid down by competent medical bodies. We ourselves are responsible to bring our services into legality. Unfortunately, every law is likely to be misused as well.

What constitutes medical negligence?

Medical negligence is a breach of legal duty to care as per the expected standards that causes harm to the patient. It could be in the form of error of diagnosis, under or over investigations or treatment or deficiency in care. When doctor accepts a patient, it becomes an implied undertaking to offer standard care. It assumes that he has enough skills to handle such a patient. Every doctor is expected to act with reasonable care and skills. Error of judgment is considered as negligence only if other professionals in the same situation would not have done the same. Only because something went wrong is not considered negligence if professional experts opine that adequate care was exercised while treating a patient. No doctor is supposed to give warranty of perfection of their skills or guarantee of cure. If action of a doctor is appropriate to the standard laid down by

professional body, error in diagnosis or outcome is not a negligence.

How to be legally safe in medical practice?

Burden of proof of negligence is to be provided by a complainant. However, it is ideal that doctor can provide evidence of standard of care given to a patient. It is possible only if actions are not only communicated but also documented. Communication refers to offering relevant information about medical action while counselling is an act of guiding and supporting the patient to go through the illness in best possible way. Every doctor must follow these principles and document the same with attested signatures of both the parties. Documentation is the legal proof of having done it and without documentation, law considers it as not done. In serious situations where poor outcome is possible, it is best to record the counselling session on video. If doctor practices with principles of art and science of medicine, it builds good patient-doctor relationship with attendant mutual trust. It forms the core of avoiding legality in medical practice.

Personal notes

I recall when medical practice was brought under consumer protection law, there was an objection raised by our association. It was argued that medicine is a profession and not a business. However, I had openly differed because many doctors were not behaving as professionalsand those who did adhere to professional standards had not to worry about consumer protection law. I formed a habit of writing short

clinical notes and provisional diagnosis followed by drug prescription and general advice. It served dual purpose of ensuring rationality and also honesty. This habit of documentationalong with proper counselling automatically takes care of legal safety and shows transparency and accountability. Law does not punish a doctor even if he fails to cure a patient provided, he has followed standard guidelines as expected. I am aware consumer protection act may also be misused but such a risk is minimized by good behavior.

Take home message

We are now bound by law and not only by morality. However, if one follows moral principles, there is no worry about legality. Every law may be misused and so we must exercise utmost care. Documentation is all important that alone is considered as legal proof of your action. There is no need of defensive practice that itself may be questioned. Good doctor-patient relation with attendant mutual faith is the key to be legally safe.

Chapter 19. How to deal with incurable disease?

Never must the physician say disease is incurable, nature has hidden powers and mysteries – Morris Fishbein
I don't have a choice about incurable disease butthere are other choices in life to make – Michael Fox

Concept of "cure"

Word “cure” comes from Lain word “cura’ meaning care, concern or attention. Rational medical practice includes care, concern and attention in the management of every disease. Thus, in literary sense, it should be possible for every doctor to “cure” every disease. However general expectation of “cure” refers to healing of damage caused by disease with complete functional recovery and regaining original state of health. But in medical parlance, “cure” is considered when there remains no evidence of active disease at the end of complete treatment irrespective of persistent functional disability.

What is incurable disease?

Medically speaking, disease is considered incurable when no more medical intervention is likely to help further recovery. However there exist non-pharmacological and non-surgical modalities of treatment other than medical interventions and doctor should not give up before trying them. For example, Down’s syndrome cannot be cured but such a child can be helped in various other ways such as physiotherapy, occupational therapy and other rehabilitation measures and can lead a near normal life. Many diseases are controllable even if not curable and if well controlled, person can lead normal life with or without continued management. Diabetes and asthma are common examples of such controllable diseases. Many immunological disorders may get into remission by itself or by immune-suppressive drugs and remission may last even forever. It is important for all of us to realize that it is patient’s immune system that cures the

disease, albeit with the help of a doctor and his treatment modalities. However, if immune system does not act favorably, even completely “curable” infections such as Tuberculosis may be fatal due to immune-mediated complications. Thus, it is clear that incurable disease may still be treatable with the hope of natural control if not cure. By convention, incurable disease suggests bad prognosis for life. However correctly speaking, it means science is unable to cure but proper management, immune system, nature or even luck or destiny may be able to control if not cure. Finally, today’s incurable disease may find cure tomorrow. Recently stem cell transplant or specific organ transplant has offered “cure” in increasing number of disorders.

Dealing with incurable disease

Once the disease is considered to be incurable, next step is to find out whether disease can be controlled or at least disease progression can be slowed down. In all such situations, aim is to make the patient as comfortable as possible with quality of life maintained to an extent feasible. This is done by nutritional support, hygienic measures, relief from pain if any and psychological boosting provided by family and friends. All such measures can make a difference in ultimate outcome.

Counselling a patient with incurable disease

Counselling refers to guiding and offering moral support to a patient so as to help him go through the ordeal. It is well known that **mind helps the body to recover**. Counselling is an art that is to be learnt by oneself. Unfortunately, it is not taught in medical schools. One should not consider

helplessness even in incurable disease. Finally, “I treat and he cures” is the faith in our religions that most patients understand. Relatives must be informed fully about the incurable disease but not the patient directly. It is enough for the patient to know that you have not given up because you have seen many of such patients recover well. Once the patient knows that his doctor is with him, it gives him moral boost. We owe that much to our patients suffering from incurable diseases.

Personal notes

Every doctor faces a challenge to deal with incurable diseases. In such situations, empathy plays major role. I recall an infant suffering from fatal neurological disease (spinal muscular atrophy) who would not see his first birthday. Even when diagnosis was certain, I subtly prepared parents over next few days to anticipate the inevitable outcome before announcing incurable disease. It is said that time heals. Within a week, parents asked me to ensure a painless death for their infant. In another incidence, a baby was born totally paralysed without myelin – the insulation cover to the nerves –another incurable fatal condition (congenital amyelinosis) and I knew that survival would depend on mechanical ventilation for life and hence impractical. It took some time to confirm the diagnosis and literature search revealed handful of such cases in the world and none had survived. But parents would not accept the diagnosis because their family astrologer opined that if life was maintained on a ventilator for a month, this baby would improve on its own.

We did cooperate with their wish and ultimately, they accepted the inevitable. In this case, disconnecting a ventilator amounted to killing the child and we had to take legal advice before disconnecting the ventilator that also meant medical opinions from unrelated experts. But there are times when survival if at all, would be in a vegetative state and in such a case, relatives need to be counselled to consider signing DNR – "Do not resuscitate"

Take home message

Incurable disease is still treatable though may not be with specific curative drugs. There are other types of support such as nutrition, hygienic measures, pain relief, physiotherapy and psychological boost and they all help to offer comfort. Counselling a patient is an important part of management and knowing that doctor is around for any help makes the patient feel better.

Chapter 20. How to deal with failure of treatment?

Many medicines few cures – Benjamin Franklin
Success is not final, failure is not fatal, it is the courage to continue that counts – Winston Churchill

Meaning of "getting well"

To a patient, it connotes total recovery back to original state of health. To a doctor, it refers to recovery to an extent

possible depending upon multiple variables such as type of the disease (curable, controllable or incurable), stage of the disease (early or late diagnosed) and response to standard treatment (response also depends on individual patient's health and immunity). In other words, "getting well" is as per the expectation – patient expects total recovery and doctor expects what is best possible in a given situation.

Doctor must anticipate progress

Once final diagnosis is achieved and standard protocol of treatment is defined, doctor must make time-wise anticipation of expected progress, considering variables related to disease and health status of the patient. Time to time assessment during treatment period would ensure that patient is progressing as per anticipation. In case of any deviation from expected course of events, doctor is timely warned about likely change in management that would again ensure necessary correction. Such an anticipation is important as much as the correct diagnosis and treatment. For example, patient diagnosed to have acute bacterial pneumonia is expected to show improvement in tachypnea first, within 2-3 days, followed by reduction of fever over next few days and cough may worsen for a while at that stage before it resolves completely over next few days. Such an anticipation would not worry a doctor and in turn a patient, even if cough worsens as it was anticipated as a course of right direction of recovery. However, if temperature is normal but tachypnea persists, your antenna should go up to trace the cause, it may denote septic shock.

Similarly, first symptom to improve in correctly treated typhoid fever is feeling of well-being and return of appetite and doctor finds feel of abdomen improving but fever continues to be high at that stage. So, for a patient who has sought treatment for fever feels he is no better but doctor knows that recovery is on the right path. Such is the importance of anticipation of course of events during treatment.

Need to counsel and document anticipated progress

It is not enough to know the diagnosis, treatment and prognosis or anticipated progress but equally important is to counsel the patient and document the same for records. Every doctor must develop skill of counselling and make a habit of documentation. It signifies honesty, transparency, accountability and responsibility. It instils faith and mutual trust that has a positive impact on outcome. As discussed above, patient must be informed about the best possible outcome which may change over period of treatment because of many variables. At times, patient may not be happy with the progress that may be short of his or her desired expectations, even when you are satisfied. In such a case, patient has a choice to take another opinion and one should suggest it upfront.

But when patient does not get well as expected –

Problem arises when patient's progress does not keep up with what is expected and anticipated by a doctor. That is how time to time assessment of the course of events are important and should be informed to the patient or their

relatives. Earliest deviation is spotted, not only patient is informed about change in the course of events but also there may be a change in outcome different than what was expected to begin with. It also needs to be freshly counselled and documented. Doctor must inform why in his view, course got deviated and how he is likely to correct the same. When things are not going the way they should, best way is to talk to the patient more often and try to answer patiently and calmly all doubts raised or at times even allegations made against the doctor. It is said that anger is demonstration of pseudo-strength of a weak person. One must not get defensive but inform the truth. It is important to let patient know that you have put in best of the efforts but they may not always equate to best of the outcome. Equally important is to let the patient see your best efforts and concern about the situation. Honesty pays and so if there are any mistakes inevitably occurred, it is best to own them instead of defending them. Always offer upfront a chance of getting second opinion and let the patient select his choice of second opinion. Most times, patients would ask a doctor whose second opinion they could seek and in such a case, suggest 2-3 alternatives so that they can still choose one of them. It proves your transparency. Once patient has developed faith and knows doctor is doing his best, invariably he would leave choice of second opinion to a doctor. It means half the battle is won. After all patients are not bothered about how much you know but they want to know how much you care. So not only care always but it also must be evident to a patient.

Modesty and honesty are two virtues that come handy in difficult situations.

Personal notes

During training days, responsibility is shared by seniors but in private practice, one is totally responsible for the outcome. Parents are not satisfied unless child completely recovers and at times, one has to face unrealistic expectations from parents. I recall a child suffering from typhoid fever who was improving well with regaining of appetite and energy but was not yet afebrile. Fever is the last symptom to disappear in typhoid. In spite of explaining these facts and assuring that fever would soon disappear, parents were upset. It took some time for me to learn by myself how not to argue with parents but suggest alternative opinion. I also learnt to anticipate “troublesome” parents and sought help in time from senior colleagues. It is ideal to convey a possibility of a rare exception of treatment failure due to patient’s inability to respond to medicines. In such a situation, I assess the attitude of parents and suggest a second opinion.

Take homemessage

Medicine is a science of uncertainty and doctors act by probability supported by knowledge, experience and even an intuition. Naturally it is important to convey to a patient that best efforts are guaranteed but not equating to best outcome. However, it does not mean that you paint a gloomy picture each time to be defensive, it may fire back. But what is important is to anticipate, inform, counsel and document.

Be honest and don't hide mistakes, to err is human. Be answerable to yourself and not blame others.

Chapter 21.How to communicate need for further tests or referral for second opinion?

If you can't measure it, you can't manage it -Peter Drucker / If world thinks you are not good enough, you know it's a lie but get a second opinion – Nick Vujicic

Provisional diagnosis a must before ordering tests

Laboratory tests are specific to a disease and there are no "routine" tests. Thus, it is imperative that doctor thinks of provisional diagnosis based on analysis of detailed history and focused physical examination before considering specific laboratory tests to support bed-side diagnosis. It is likely that doctor may consider 2 or 3 probabilities and may like to exclude them all together at one time or by priority. Doctor should never consider all possibilities as there could be many. Of course, tests without any provisional diagnosis is irrational as test results have to be correlated with clinical diagnosis. No test result offers diagnosis and most laboratory reports end up with a statement "correlate clinically". It is ironical that laboratory person reminds a doctor to depend on clinical judgment for correct interpretation.

Not all diseases need confirmation by tests

Disease that is clinically evident and easy to monitor progress does not need any confirmative tests. Acute tonsillitis is a classic example. However, when a disease is not evident clinically such as urinary tract infection or when progress of disease is difficult to monitor as in case of meningitis, specific tests such as urine culture and CSF respectively are a must before starting treatment. Also due to increasing drug resistance in diseases such as malaria, tuberculosis and typhoid, they must be confirmed before starting treatment.

Counselling a patient before ordering tests

After arriving at a probable clinical diagnosis, it is ideal to explain the patient why you feel the need for confirmation. It is important to preempt likely test results and how they would guide you further in proper management. Test results often mention insignificant abnormalities noted in a given test that may not be relevant as such findings may be seen in normal persons. For example, abdominal USG often reports small lymphnodes that are of no consequence but for patients it is an abnormality. In such expected situations, it is ideal to inform patients ahead of test results their insignificant relevance. It allays fears and doubts rather than defending results after they are received. Patients don't understand variation of test numbers nor its relevance. This commonly happens in CBC when patient is worried about numbers that don't tally with norms mentioned on test reports. This is more so when tests are done in infants or neonates in whom normal numbers are different than those of older children or adults and most laboratories have

printed norms for adults and age-related norms are not mentioned. So when you order tests, inform patients why they are asked for and what could it mean if results are positive or negative. Such a discussion prior to getting test results is important. Unfortunately, most doctors depend on test results for their opinion as they have no clinical diagnosis. Don't forget test results are not reliable for final diagnosis without clinical correlation.

When first set of tests provide no clue ---

It is ideal to discuss interpretation of positive as well as negative test results and possible plan thereafter, right when you ask for first set of tests. It ensures that patient is not surprised and upset to know tests have not offered any clue to diagnosis. If first set of tests fail to diagnose the disease, obvious plan after negative test results would be to order second set of tests or consider second opinion. At this stage, you must discuss pros and cons of both the alternatives. I feel at this point, first choice should be second opinion. This is because second opinion invariably would end up with asking for more tests. However, if you order second set of tests without second opinion and if they also fail to diagnose the disease, second opinion will be followed by another set of tests. Drawing blood repeatedly is hated by patients and so also ordering more tests periodically. This is because it conveys to patients that doctor has no clue and he is searching for diagnosis without any specific direction. Besides, expenses mount up and all this may lead to dissatisfaction and even argument or allegation. It is best

avoidable with second opinion that you must suggest at right time.

Personal notes

I prefer to discuss every aspect of the disease with the parents to an extent that my medical assistants wonder whether I take a post-graduate teaching session with the parents. I also subtly inform them that outcome of treatment also depends on how patient is able to respond and follow it with what I would do in case of failure of treatment. If this is followed, parents don't question the need for some more tests or second opinion because they are preempted. Over years I have become more aware that I am liable to make mistakes and parents should be subtly warned about such a possibility. Though as I become senior, parents disbelieve that I could be wrong. Well, it is a bonus to seniority but I never depend on it.

Take home message

Communication and counselling are key factors in treating a patient. Relevant information about the tests being ordered and need of carrying out these tests must be conveyed to patients and so also possibility of positive and negative test results. This is the way patients must be involved in disease management that in turn leads to faith and mutual trust between doctor and patient. Once this relation is established, I am sure patients would be ready to follow advice thereafter, be it additional tests or second opinion.

Chapter 22. How to respond to inappropriate patient requests?

Do not let behaviour of others destroy your inner peace – Dalai Lama
Most bad behaviour comes from insecurity – Debra Winger

What is meant by inappropriate patient requests?

What is considered to be inappropriate by doctors may be felt most appropriate by patients. So we need to be unbiased when considering patient request as inappropriate. In other words, we need to get into patient's shoes to be most fair and empathetic. It is doctor's duty to spend enough time, communicate and counsel properly and answer all questions however silly they may be. This should be the appropriate behavior of a doctor and if not, patients may demand, then it is not inappropriate. Only when we consider request as inappropriate, we must respond appropriately and not argue. Response comes from cerebral cortex while argument is only a knee jerk from spinal level. Response is a result of thought process that spells what is right while argument is meant to decide who is right in which case it becomes an ego issue.

Common requests from patients that are inappropriate

1. Medical practice is the only profession where patients (clients) expect service at any time of their convenience, even in absence of emergency situation. 2.Many times, advice is sought on the phone including at any odd hours and is expected to be delivered without seeing a

patient, irrespective of its feasibility and of course free of charge.
3. Cell phones have made it possible to speak to the doctor directly anytime and doctor is supposed to respond to each call, irrespective of being busy with a serious patient.
4. Every patient expects to be attended in a short time even if he has come later than his scheduled appointment time. After all there are enough excuses to offer for being late.
5. Majority patients have faith in medicines and tests so they insist to get them irrespective of whether they are required or not. Test results are believed more than doctor's clinical judgment that may be often questioned. 6. Test results are sent on WhatsApp for interpretation, instead of patient or his relative bringing them to a doctor and detailed discussion is expected to be delivered on phone.
7. At times, patient expects a doctor to Interpret results of tests ordered by another doctor or advice on medicines prescribed by another doctor. They expect a free second opinion without seeing the patient.
8. Every concerned relative or friend of a patient expects latest information about the disease and progress on one-to-one basis and feels it is doctor's duty to satisfy their queries, as patient is near and dear to them.
9. Finally, patient may expect concession in doctor's fees as no hospital, laboratories or pharmacies offer any concession.

How to respond to inappropriate requests?

Most important "mantra" is not to lose temper but still make a point. For example, patient arrives when you are about to

leave the clinic, inform him that you are going to attend an emergency and so you would offer him first aid and ask him to report next day. Don't spend much time or discuss any details. It conveys to a patient clearly that he did not get full advice but at the same time you have attended him and not sent him back without seeing. Wise patient learns not to repeat the same mistake.

In modern era of easy communication through cell phone, insist on messages and not calls on cell phone. Cell phone must be used only for emergency situations. However, every patient claims an emergency and so best way is to suggest urgent hospitalization to be on safe side, if they really think is an emergency. Most parents then have said that it is not that urgent. Encourage calls on land-line that can be attended by your assistants and answered accordingly. Assistant can be trained to reply to common queries. Automatically, calls on land-line come during working hours. Remember, **Supreme Court expects doctorsnotto offer advice on phone without seeing the patient.** Otherwise, doctor is held responsible for the outcome. I have been giving advice on phone all these years but now I add to say this is first aid advice and it is better that patient is seen. So, you are legally safe and at the same time you wish to help patients.

If patients insist on laboratory tests or x-rays, best way is to say that in your opinion they are unlikely to help though patient can get them done if they wish. It takes care of occasional time when such a test proves to be useful though with inconclusive reports, patient knows that he has spent money for nothing. However, if patient asks for specific drugs

like antibiotics that are not required, one must be firm not to prescribe. Many patients ask for tonics and I inform them that it would be useless so I won't prescribe but as it is harmless, they can decide to take it. If they insist, prescribe it. After all, manufacturer and chemist also must earn and everybody will be happy thereafter. If I am asked to opine on prescriptions or test results ordered by another doctor, I inform the patient that correct interpretation is possible only with correlation with physical examination. Most doctors don't document their physical examination findings and so it is not fair for you to offer advice merely on test results.
In serious situations, every close and not so close relative and friend wishes to get first-hand information from treating doctor. Best way is to request immediate guardians to take care and if they wish, you should be ready to talk to all of them at one time.

Personal notes

Our joint practice helps patients to contact one of us almost through 14 hours of working day from 8 am to 10 pm. This saves us from untimely requests from the patients. If occasional parent insists on unnecessary tests, I document my advice and leave it to them to undergo the test. There is no point in making an issue of it. However, demand for an unjustified antibiotic is not accepted and opinion to that effect is documented. At times, parents have objected to accept prescription of steroids even when scientifically indicated and in such case, I would document my advice and its justification but leave it for parents to follow or not. After

all patients have autonomy but if they don't follow your advice, you are not responsible for the outcome.
Once a VIP parent wanted me to see their child at odd hours even when there was no emergency and so I refused. It upset them and they never came back to me. I consider it as their loss and not mine.

Take home message

Consider patient request with due allowance to their fear or concern about the disease or treatment. So, within limits, what is inappropriate to a doctor may be most appropriate to a patient. Inappropriate requests must be handled with care, calmness and diplomatic way to avoid bitterness and arguments. At the same time, show gentle firmness in your opinion. Remember patient has a right to his own views and so we should leave it to him to decide whether to follow your advice or not. So be flexible to a large extent especially when patient's demands are harmless though may also be useless.

Chapter 23. **How to communicate risks involved in management?**

As the world becomes more digital place, we cannot forget about the human connection – Albert Einstein
Effective communication depends on trust and trust depends on trustworthiness – Steven Covey

Concept of "risk"
Risk refers to a chance of unacceptable outcome of any

action. Life itself is a series of taking risks as every step has a margin of risk, however small it may be. No outcome is 100% certain or safe and so there is always a fear of uncertainty. In fact, medicine is a science of uncertainty and doctors have to depend on art of probability. Therefore, it always involves some risk. Moreover, outcome of medical treatment depends on many variables, of which most unpredictable variable is individual patient's response to treatment. Doctor has no control over patient's response as much as teacher has no control over student's response and therefore outcome is not in the hands of a doctor. Even the best of the treatment may not guarantee best outcome.

Risk management

It is a process of identifying, monitoring and managing potential risk situation in order to minimize negative impact. As every act has a potential risk, doctor must evaluate risk-benefit ratio. One has to weigh pros and cons. First consider what may happen naturally if no action is taken. After all no action may be apparently safer than any action as in case of minor trauma that heals by itself or a viral infection that is self-limiting. However, in a curable bacterial infection, antibiotic should not be withheld just because there is a possibility of side effects of an antibiotic. In such a situation, side effects of antibiotic are so minor as compared to benefit of cure of bacterial infection which otherwise may endanger life. So clearly benefit outweighs risk and so such a risk is worth taking. In such a situation, it is best not to talk upfront about side effects. When asked by the patient, one should highlight safety of the drug with rarely minimum and

inconsequential temporary side effect. Many patients are well informed through “google-doctor” and have read more about side effects than effects. Let patients know that you are responsible for correct information and google-God information is not necessarily applicable to everyone. To a very inquisitive patient who talks only about side effects, I often given them an example that makes them understand a point. I ask them whether it is safe to sit in my clinic under a roof that may collapse anytime. Well, there is always a possibility of collapse to a pessimist but optimist never thinks about it and he is mostly right. Every day one hears about fatal accidents on road and even then, no one stops travelling, simply because risk is negligible. However, situation where in chance of risk and benefit are equal decision is difficult and should be taken together with the patient. For example, treatment of some cancers may be equally dangerous to life as cancer itself. Besides, side effects of treatment may be unbearable requiring repeated hospitalization as against natural sinking that may be less painful. It is an individual patient’s mindset that should decide best possible action. But there is always a hope for improvement and so many may be ready to take a risk. Calculated risk is a need to achieve a goal but the final decision must come from the patient.

Use communication skills

Communication refers to giving relevant information to the patient. Relevance must be appropriate to the situation. Information not only should be truthful but at the same time it should not discourage the patient to lose hopes of

improvement. One needs to be tactful. Most important is the fact that patient should not feel doctor is hiding some information. Such a suspicion leads to despair. So best is to explain to relatives in front of a patient. Always emphasise on positives first. Even in a dire situation that holds significant risk, once you decide that risk is worth taking, talk to the patient about negative impact of not taking a risk. It may amount to a definite disaster while taking a risk may have equal chances of success. It is a good idea to describe your own experience about similar patients who have done well. At times such stories could be fictitious but bring in hopes. Mind plays a significant role in recovery. Doctor must imbibe confidence in a patient that success is always a possibility and so risk is worth taking.

Finally, universal faith on almighty is embedded in our culture, especially in high-risk situations. So, it is appropriate to convince a patient that you will leave nothing undone and put-up best efforts. After all outcome depends on luck and luck favors the brave. So, patient must pray and keep mind cool while you as a doctor do your best.

Personal notes

I recall an incidence when a child was admitted with acute appendicitis for whom I suggested urgent surgery. Parents took few hours to decide and meanwhile child's abdominal pain disappeared but patient had started deteriorating. This child had developed gangrene (meaning appendix became dead due to loss of blood supply and so pain disappeared but child deteriorated). I explained in details to make them

aware that child's life was in danger but they would not agree. In that situation, I asked them to sign a document that they had chosen to disregard my advice and so would be responsible for the outcome. At that stage, parents agreed and child was saved after surgery. I have faced similar situation when a child suffering from pneumonia was breathing faster and required hospitalization but parents refused as their doctor had opined against. I refused to treat this child and left them to decide what suited them.

Take home message

Risk is involved in every step of life. A drug that has an effect also has a side effect, there is no drug without a side effect. It is always right to take a risk when benefit clearly outweighs risk. Even in such a favorable situation, there exists a risk that should be downplayed. Doctor has to be tactful to communicate when risk is high but must be taken for hopeful outcome as against not taking a risk that is a sure disaster. It should be communicated in a way to offer hope. Your experience about stories of success in similar situations helps to boost morale of the patient. It has a positive impact that improves chance of success.

24. How to prepare yourself to survive violent patient encounter?

Most violent element in society is ignorance – Emma Goldman

Aggression is the first step on the slippery slope of selfishness and chaos – Anne Campbell

What constitutes violence?

WHO defines it as intentional use of force or power, threatened or actual, against oneself, individual, group or organization which results in or has high chance of resulting in hurt, damage, destruction or even death. It is an emotional outburst of destructive nature, an intentional use of physical force, an act of power of one person over another.

Changing scenario of medical practice

Physicians of yester years commanded respect from the community to an extent that doctor's views were sought not only for health issues but also in every other familymatters. Community had faith in their doctors as they witnessed how much doctors cared for them and community did not care about how much doctors knew. Doctors showed concern with empathy as they communicated, counselled and stood by their patients in times of stress. Patients felt confident and had tremendous belief in their doctors. Things changed for the worse with rapid deterioration in doctor-patient relationship. It is a great irony that medicine, the epitome of healing profession is now often exposed to violence. It is a paradox.

Genesis of this change

Both doctors and community have changed. There is a brutal dimension to medicine in that what is intended to heal may cause pain, damage or even death. Doctors often succeed but at times fail in their goal. Physicians don't get pleasure in causing pain to their patients but their brains react to viewing pain less strongly than what patients feel. In fact, it is an adaptive response to be able to function effectively in the

face of patient's suffering. This may blunt their response to patient's pain. This may lead to confrontation as doctors use harsh words, show rudeness, authoritarian approach and often intimidating behavior. On the other hand, community believes and expects that doctors should cure all problems and save every life. If outcome is short of desired, it is seen as carelessness, negligence and incompetence of doctors. With such a dichotomy of what doctors can deliver and what community expects, irrational behavior of few members of the community sets up a trouble that may escalate to any level with mob mentality.

How to avoid situation that may lead to violence?

When patient under your care does not progress the expected way, you must suggest to shift the patient to a better facility at optimum time. Doctor must anticipate poor outcome at the time when things are not looking so bad. One major problem arises when patient is shifted too late and hospital where he is shifted, doctor may loosely make a comment that patient should have been shifted much before. In the hospital setting, doctors should be cautious to explain real situation in a manner that seriousness is subtly conveyed. It is best to say that outcome depends on how patient responds and that will be known over next few days. In other words, patient's relatives understand the seriousness and are sensitized to an inevitable outcome. At such a point, relatives start losing cool and try to find mistakes including most trivial issues such as they were not allowed to enter the hospital and security person was rude.

You must maintain calm, be empathetic to their problems but at the same time, justify the action that is in the interest of the patient. You must allow relatives to vent their frustration and anger, listen to them without interrupting and finally counsel them tactfully. It is the arrogance of a doctor that often sets up a problem and so learn to remain calm and confident. Another important fact is to allow relatives to witness care being taken, within limits and spend time talking to them periodically. It often avoids trouble. Finally let one doctor remain in communication as a spokesman so that there is no confusion created by different ways of expressing same message. It is at times conceived as opposing views and becomes bone of contention.

Personal experience

In a general hospital, child was brought in a state of septic shock and attending doctors had appraised relatives about seriousness and danger to life. However,the next day when child was sinking, mob appeared in the hospital and started fighting with doctors and threatening them. Attending doctors anticipated bigger problem and summoned me as a senior doctor. First step I took was to make all of them sit in a room and told them that I would listen to their complaints and find a solution. I allowed them to talk as much as they wanted. They wanted to know why child was not improving in spite of correct diagnosis and proper treatment and so in their views, doctors were negligent and incompetent. As a lay person I thought they had a valid question. Before answering their question, I asked them whether any of them was a

teacher in school and luckily for me one of them was. I asked this teacher whether every student in his class scores good marks and passed. He said not all pass, to which I told him that he is responsible for bad teaching. He immediately said that it was not correct because he did his job well but few children did not study or understand and so he was not responsible. I explained to him same thing has happened in this child, Treatment is correct but child fails to respond. He understood my point and I requested him to explain to others. I waited as mob became quiet. This teacher told me that I should try my best and I assured him that it was already being done. Other doctors were surprised how I could douse the fire within this mob so easily.

Take home message

One must anticipate trouble and act in time to share responsibilities. Doctors must learn to avoid harsh words and rudeness that always fires back. We have to remain cool and not shout but explain in a way that relatives cool down. Force of any kind and authoritarian attitude leads to trouble. We must not forget that failing situation results in inappropriate behavior of relatives and they need support rather than arguments. Doctors must follow what previous generation of doctors did. They were good listeners, empathetic and caring. If one follows this rule, trouble would be avoided. Of course, there has to be deterrent by law for such a violence against doctors.

Chapter 25. Doctor, are you happy in life?

Purpose of our life is to be happy – Dalai Lama
It is impossible to build happiness on someone else's unhappiness – Dalsaku Ikeda

Life is a journey and not a destination

Each journey begins with a dream. Some of us may have dreamt to be a doctor while others became doctors by default. However, when a journey as a doctor begins, one definitely dreams of future life. This is the time to know what you want to achieve out of doctor's life, very purpose of life. You need to set priorities, decide what toad to take to reach there and assess whether it is reachable. After all, life is what we perceive! Life is best for those who are happy and so enjoy, difficult for those who analyse and so unhappy and worst for those who criticise and so frustrated.Life lived for others is a life lived well.

Purpose of life as a doctor

Fact that one exists does not make life worth! What is the measure of worth? Is it success or happiness or both? Both may not always go together in equal proportion.
Success is you get by any means what you desire while happiness is you want what you need and you want what you get. Success is what others think about you while happiness is what you perceive yourself. Robin Sharma in his novel "monk who sold his Ferrari" defines success as an unintended side effect of an act done for anyone other than yourself. Such a success is most difficult and but possible to achieve in life. However, success lies in happiness and happiness in turn promotes success. Happy person is not the

one who has everything but one who makes the best out of whatever he has. So, appreciate what you have and be happy, try to improve without competing with others – otherwise pursuit of happiness itself becomes the cause of unhappiness.

Life journey has three phases

Generally, life journey evolves and creates new challenges from early age through middle and old age. During early age we dream, middle age we try to achieve our dreams and old age we introspect what better could have been done that we lost precious time and opportunities. During early age, we have time and energy but no money, in middle age we have energy and money but no time and in old age we have time and money but no energy. It is clear we need to strike a balance in life. When young and successful, you lose our health to collect wealth and then in old age, you lose wealth to regain health. Money is required but it also often brings in problems and hence make journey of life with minimal luggage that brings happiness more than success.

Phases of medical practice

To begin with it is the **phase of aspiration**. Initially there is wishful thinking of scientific, ethical and rational practice but waiting for patients makes one get restless and stressed. Slowly there is a drift from **aspiration to compulsion** leading to monetary pursuit that brings in wealth with increasing volume of practice. It appears to be end of stressful life with happiness forever. Soon life revolves around practice and money with increasing greed. It results in burning-out with

deteriorating quality of practice, health and family – all at a time. It results in work-life imbalance with attendant cost to health. This is the **phase of success without happiness**. But habits die hard and so life continues the same way thereafter as it is too late to change. But as you entered third phase in which other colleagues start shining more and one becomes insecure about losing patients to other colleagues. By now if you have not developed any other hobbies, you remain frustrated and depressed. So, this is the **phase of eternal unhappiness.**This is how many end up without attaining happiness in life.

Be responsible forhappiness in your own life

Purpose of life is happiness more than mere success. Road to life twists and turns and so we need to turn rejection into an opportunity.

Stanford University in USA was born out of such rejection. Mr and Mrs Stanford were on vacation to Boston in their old age and suddenly thought of donating all their assets to his alma-mater – Harvard University. It was their last day in Boston and still decided to see the Dean if possible. They had no appointment but were ready to wait through the day in case Dean would have time to see them. Dean's secretary informed the Dean about old couple ready to wait till evening and go away if Dean had no time. So, Dean decided to see them when they offered all their assets to the institution. Looking at the old couple in informal vacation attire, Dean thought they would probably offer few dollars and so thanked them without accepting their offer. Mr Stanford was

dejected and as they walked out, his wife said to him “why should we not start a university ourselves and compete with Harvard” and that is how today Stanford University stands as one of the most prestigious universities in the world.
Life should be like a tennis game – you serve well, then return well but don’t forget game starts with love-all. Life is like a piano where melodies arise from use of both black and white keys. Similarly, life also has ups and downs and we need to brave through to make ourselves happy. But don’t forget life is like a bicycle – if you stand still, you fall. So,we must try to move forward in life.
Avoid one letter word “I”, instead use two letter word “WE”, overcome three letter word “EGO” because its outer edge cuts popularity and inner edge purity, instead use four letter word “LOVE”.
Learn to “give” more than “take” – it comes back to you in plenty. So, we must give and forgive but often we get and forget.
Patience and silence are two great energies in life. Patience makes you mentally strong, silence emotionally strong.

How to achieve happiness?

Finale to perfection in life is to be happy. Happiness resides in you – search for it. Be grateful for what you have, it will make you happy. Motivate yourself to work with passion and joy – you will enjoy it. Once you are motivated, habits will sustain your happiness. You must develop an attitude to achieve happiness, after all attitude takes you to altitude. Share your happiness with others, spread happiness

wherever you go and not whenever you go. Some people make you happy when they come, others when they leave. Happiness promotes health so that you can enjoy life.

Personal notes

During final year of postgraduate training, I started teaching my juniors and also undergraduate medial students to help me learn the subject better.Teaching is the best way to learn. After completion of education, as I was appointed as honorary teacher in Grant Medial College, teaching for learning became a passion.It continues till today and it gives me tremendous happiness besides keeping me updated. Before starting practice, I went to get blessings from one of the first pediatricians of India – Dr Raghunandan Sanzgiri. On knowing that I was appointed at J.J. Hospital, he told me that I would be happy if I sincerely served the poor and teach medical students. He ended by saying that such daily acts of goodness bring happiness in life. Since then, I never missed attending J.J. Hospital for 30 years and I enjoyed my tenure. I believe in destiny – pre-determined course of events and I was never short of anything in life nor had anything in excess – a perfect balance. Thus, I could spend more time of my life in teaching rather than earning money and it has made me rich in happiness index. And even then, money did come, more than what I needed.

Take home message

Strive hard to be excellent and rational in your practice – passion and joy in practice makes it possible that in turn bring happiness. You must enjoy life – don’t forget life has an

expiry date. Growing old is natural but growing up is optional. Aging is the only way to live longer – don't worry about old age – it does not last long. Tragedy of life is not death but what you did not do when alive. Life is a long journey from human being to be humane. Finally, take care of your own life so that you can die young as late as possible.

Chapter 26. Mens sana in corpore sano - healthy mind in healthy body

Health is not valued till illness comes – Thomas Fuller
You have power over your mind, not on outside events. Realise this and you will find strength – Marcus Aurelius

Introduction

Health was considered as "divine gift" till Hippocrates pioneered the move away from these notions of health and encouraged a focus on acquiring knowledge about health. He believed that sound health was the result of balance between various body fluids such as blood, bile and phlegm. Since then, concept of health has much widened. WHO defines health as "complete state of physical, mental and social well- being and not merely absence of disease or infirmity" Such a definition does not take into account changing concepts of health related to age and culture. For practical purposes, health of children refers to well-being in terms of acquiring destined growth (physical increase in size), development (maturity of function enabling acquiring new skills), activities and energy that facilitates the child to

perform to his / her maximum potential and behaviour commensurate with social expectations (emotional, social and spiritual). It is well known that body and mind are interdependent and together decide final health status of an individual. It must be nurtured by everyone of us right from childhood but it is never too late. As doctors, we should act as “health guides” rather than “disease managers”.

General health-promoting factors

Energy intake (calories consumed through food) and energy expenditure (physical exercise besides calories burnt for basal metabolism) must be well balanced to maintain sound health. Hence diet and physical exercise are important in promoting good health.

Diet – exclusive breast feeding for first 6 months followed by complementary feeding (from family pot) while continuing breast feeds as long as possible in first two years lays the foundation of good health. Vegetables and fruits are important components of diet along with dairy products, cereals and pulses in both vegetarian and non-vegetarian diet. Vegetarian diet is considered better for health, only if one consumes all groups of food items. It is equally important to eat happily, together with the family members. Communication and bonding between all family members also help nurture sound mental development.

Physical exercise – Parents must inculcate sports activities in children right from early age and avoid use of electronic gadgets. Age-appropriate physical exercise can be chosen as

per the child's preference and continued regularly. Once a habit is formed, it is sustained for life.

Besides diet and physical exercise, body needs rest to rejuvenate after day's hard work and hence sleep is important. Similarly, mental health helps to ease stress and remain happy that adds to better health.

Sleep – Age-appropriate duration and timing of sleep is vital for sound health. Older child and adults need 6-8 hours of sleep while younger ones need longer duration. Ideal sleep time is between 10 pm and 6 am. One should avoid exposure to electronic gadgets at least one hour before bed-time and it is a good idea to meditate for half an hour prior to sleeping. Meditation refers to concentration over a fixed thought (it could be as simple as following one's breath) that takes away stray thoughts from mind. It helps to get sound sleep and one gets up fresh in the morning. It is ideal to ensure suitable environment conducive to sleep. Unfortunately, most children and adults do not follow ideal sleep hygiene.
Mental health – It includes emotional, psychological and social health. It relates to how we think, feel and act that in turn determines how we handle stress, relate to others and make choices. Mental health is facilitated by nurturing ideal culture of behaviour inculcated during upbringing in the family by spending time with family members and friends. One must learn to express feelings and discuss with elders that helps coping up with stress. We need to avoid arguments but solve differences with discussion – arguments are to find out who is right but discussion to find out what is

right, Spiritual behaviour teaches us how to love and not to hate anyone that in turn promotes harmony.
Healthy mind in healthy body is the ultimate health.

Many diseases can be prevented by nurturing health supported by good hygiene.
Hygiene – Poor hygiene is a common cause of diseases. Dental hygiene is often ignored but it is important to look after teeth and gums that otherwise become a source of infection, bad odour and poor health. Hand and genital hygiene are as important. Hands often carry infection from one to another. Food hygiene avoids infections transmitted by contaminated food.

Special care for health of every organ

Besides maintaining general health, it is desirable that extra efforts be undertaken to look after health of every organ in the body. It adds to better health through efficient working of all organs during entire life.

Lung health
Ideal breathing technique includes deep inhalation, ability to hold breath and relaxed exhalation ending with forceful expulsion of air. It helps in maximum breathing using all segments of lungs. Besides active sports, age-appropriate jogging or brisk walking and breathing exercises (as recommended by yoga or art of living) are ideal. Playing breath-driven musical instruments is a good breathing exercise and so also inflating balloons. One should be regular in carrying out such exercises. It is important to avoid smoking and minimise exposure to home pollution.

Intestinal health

Traditional wisdom knew importance of intestinal health. Castor oil was given to everyone once a week to drive away the toxins produced in the intestines. Methods have changed though principle has remained the same. Eat high-fibre diet – both soluble (oats, nuts, seeds, legume-pulses that is seed of legume) and insoluble (wheat bran, vegetables, whole grains). Avoid spicy and oily food, maintain regular eating schedules – eat slowly, drink adequate amount of water. Bowel habits are important to be inculcated to prevent constipation and its bad effects.

Cardiac health

Heart is a muscle and it keeps strong and fit with exercise, as do other muscles in the body. It is important to avoid smoking, overeating, obesity (monitor waist-hip ratio) and stress. Restriction of excess of salt (processed food is a rich source) and caffeine helps to maintain normal blood pressure.

Brain health

Brain develops fast from second trimester of pregnancy up to second year of life and development is complete by the age of five years. Thus, this is the most crucial period of brain development. Foetus can start hearing by second trimester. Talking and reading to a foetus helps in development of foetal brain. As brain development is nearly over by the age of two years, infants and toddlers must be mentally challenged and stimulated as per their age. Parents must encourage infant to learn new skills by providing opportunity.

Talking to infants during wakeful periods develops communication skills. It is important to encourage exploration for young child and best way of learning is with interaction and not memorisation. After all, learning should continue throughout life, it keeps brain active and healthy.

Renal health

Functional maturity of kidneys starts around last trimester of pregnancy and is complete by 18 months of postnatal age. However, nephrons increase in number almost up to third decade and thereafter, there is gradual involution. To maintain renal health, one must remain active, drink plenty of water, control blood pressure and blood sugar, weight and diet control, avoid processed food that contains excess of sodium and phosphorous,take care of constipation, pelvic floor exercises, don't hold urine. Excess of protein intake is bad, avoid reno-toxic drugs such as NSAIDS and damage due to dehydration, electrolyte imbalance and infection. Special care in early life includes timely diagnosis of infection if any and its prompt management. eGFR (estimated GFR) must be monitored periodically and is good screening test. It is roughly calculated as follows. 0.5 X (height in cms divided by serum creatinine in mg%). Normal GFR is 80-100 ml/min. Serum creatinine rises only when GFR goes down to <30 ml/min and thus it is a late determinant of disturbed renal function.

Bone health

Bones store calcium-phosphorous to make them strong and also release them when needed for other organs.

High calcium containing food, vitamin D (exposure to sunlight for at least 30 minutes between 11 am and 1 pm with minimum clothes is ideal) and adequate physical exercise maintain bone health. Risk of osteoporosis is increased by sedentary life style.

Hepatic health

Toxins from pesticides, chemicals, additives and unknown sources, hepatotoxic drugs such as anti-TB and anti-convulsants (must be monitored during therapy) and alcohol are likely to damage the liver and so best avoided as far as possible. Unsafe sex and contaminated needles are risk factors for hepatitis B and C viral infections which damage liver. Such infections may also be transmitted from infected mother to neonate. Hepatitis B vaccines protect liver from such infection while Hepatitis A vaccine prevents infection from contaminated food. Liver is also damaged due to accumulation of excess of fat in an obese person.

Healthy mind

Healthy mind is the best asset for the body as it promotes health through stimulating immune system as well as functioning of major organs. On the other hand, unhealthy mind is the worst enemy. Mind is the virtual entity and resides in grey matter of the entire cortex that functions through neural network and chemical and hormonal systems of the brain. Mind exists naturally as it is not the clean slate at birth but can be further enhanced by proper nurture. Mind plays an important role in healing of the disease. It is known that treatment is most effective when patient expects it to

work and is optimistic. That is also how placebo works.
To maintain healthy mind, we mustremain physically active, keep learning, develop and pursue hobbies, meditate to avoid negative thoughts and keep positive attitude, connect with friends and family to remain socially active, be happy and enjoy peaceful life. It is not possible unless one tries proactively to achieve healthy mind.
As a doctor, we must also look after mind of the patient besides the body. Application of science treats the body and traditional art of medical practice nurtures the mind of the patient. It is possible only when a doctor knows importance of healthy mind in a healthy body.

Personal notesI was lucky to be born to parents who taught the value of what we got rather than craving for more. They inculcated ideal virtues such as discipline, honesty and empathy. This helped me to develop total health as much as possible that includes besides physical and mental health, emotional, social and spiritual health. Subsequently during my postgraduate training, I was influenced by my mentor Dr Wagle who emphasised importance of being humane, respecting every person equally. He defined clearly difference between discussion and argument, discussion is to find out what is right and an argument who is right. After completing postgraduation, I was appointed as honorary assistant professor at Grant Medical College when I went to take blessings from one of the paediatricians of first generation – Dr Sanzgiri. He told me to serve the poor sincerely so that one of them would send me a rich patient in my clinic. I wondered how a poor patient in a government

general hospital would refer a rich patient but soon it was clear to me how valuable are the blessings of people whom we serve well. All such influences and many more during formative years helped me to develop healthy mind in a healthy body.I continued to remain happy with what I got.

Take home message

Remain healthy, eat lightly, breathe deeply, exercise regularly, live moderately, cultivate cheerfulness and maintain interest in life. If you don't have time for wellness, you will have to make time for sickness. Aging process is normal for all the organs but can be delayed with proper life style, so that you remain healthy as long as possible.
