

PRACTICE OF MEDICINE - TECHNOLOGY DRIVEN

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The health care needs of society are of paramount importance and advances in medical technology have provided physicians with diagnostic and treatment facilities which has resulted in countless lives being saved and overall quality of life being improved.

Medical technology has evolved from introducing new equipment to connecting patients and doctors thousands of miles away through telecommunications which enabled health information to be sent to the treating physician from specialist doctors around the world within seconds whether it be drug information, guidance for intervention or treatment protocols.

" Any sufficiently advanced technology is like magic. " Arthur C Clarke

In the late '60s Isacc Asimov wrote a fiction called "Fantastic Voyage". Four men and a woman are reduced to a microscopic fraction of their actual size, sent in a miniaturised atomic sub through a dying scientist's carotid artery to destroy a clot in his brain. If they fail, the entire world will be doomed. They ultimately succeed and come out of his body through tears in the eye and assume their normal size. Such a fantasy envisaged in those days has become a reality now.

The new innovative medical technologies - minimally invasive surgeries, Sophisticated scanning equipments, pin point accuracy in delivering radiation to tissues affected by cancer through Linear Accelerator are allowing patients to spend less time in recovery and more time to enjoy a healthy life.

In the treatment of Cardiovascular diseases the use of coronary stents to keep the arteries patent has halved the number of those dying from heart attacks. Likewise patients with an Implantable Cardioverter Defibrillator ( ICD ) now have a 98% chance of surviving a cardiac arrest. Can we believe that an artificial heart has been developed by Jarwick with a series of further refinements. That is technology at its best.

Today Diabetics have access to very accurate blood glucose monitoring technologies and Insulin Pumps are designed to deliver appropriate dosage of Insulin into the human system through a catheter placed under the skin sensing the blood glucose levels. The pump about the size of a small cellphone is attached to a waist band or kept in the pocket.

The integration of medical equipment technology and telehealth has also created ' robotic surgeries ' where surgeons need not be present in the operating rooms where the surgery is being performed. Surgeons can operate from their ' home base '. The surgeon can also operate the robotic device in the theatre to allow for a minimally invasive procedure that leaves the patient with minimal scarring and significantly less recovery time. Shortly we may also have nanobots swimming through our blood stream and scrapping plaques from our arteries.

The art challenges the technology and technology inspires the art.  
- Joseph Krutch.

The biggest news is organ printing. A California based research company has printed human liver tissue for toxicity testing purposes. Once we are capable of whole organ printing,

dying patients will no longer suffer interminable wait for organ transplantation. A day will come when we will be able to make organs from our own stem cells and replace them when needed and all without fear of rejection or life long dependence on immunosuppressive drugs and their consequent side effects.

Medicine is no longer the art in patient care once believed but it is the technology which is driving the practice of medicine to dizzy heights ultimately providing opportunities to prolong and save many lives hitherto considered impossible

" It has become appallingly obvious that technology has exceeded our humanity.  
" Albert Einstein.