Medical Practice Today

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Years ago medical practice was relatively easy and pleasant to the practitioner. It rested heavily on the practitioner's skills and judgment of the practitioner. There were so many things which were unknown at the time and practitioners tended to deal with a disease affecting a group of people as a uniform entity with uniform behavior and uniform treatment. However, variants were recognized and spectrum of disease was recognized. At the time it was very difficult to separate these variants and subtypes since not many laboratory or diagnostic markers were possible. Other diagnostic tools were invasive and too crude to separate the various entities.

With the discovery of new tools and methods to diagnose and subtype diseases as well as to categorize individuals concerning their response, complications, genes, medical practice is becoming very diverse and extremely ramified.

A single disease entity which looked uniform just few years ago, is now split into several categories with distinct immune, chromosomal, genetic, and receptor markers.

Treatment is becoming more tailored individually with significant deviation between individuals as to their treatment even when the disease entity looks similar.

An array of diagnostic tools is utilized to arrive to a precise diagnosis and precise variant.

Advances in diagnostic radiology and nuclear medicine are helping us to get a clearer and more precise anatomy and function of the pathology. Specimens can be obtained from sites without surgery. Blood vessels can be imaged, blocked or opened with minimal invasion and with excellent safety.

Pathologists have very sophisticated techniques to decipher cells and their functions using flowcytometry, immune-histochemistry, gene profiling and micro array.

Molecular biology is stepping in with techniques so precise that we can reach to the DNA, RNA, epigenetics and all components of the molecular genetics. In this fashion we can reach a precise diagnosis, more accurate and more rapid than any time before. Furthermore, we can have a precise prenatal diagnosis, a pre-implantation genetic diagnosis (PGD) and an accurate prediction of treatment response.

Robot surgery is becoming more and more part of the surgical practice, especially with complex surgery and microsurgery.
Drug design and drug delivery systems are becoming extremely good that it is possible to cure illnesses we could not cure just few years ago. Personalization of disease and treatment is more recognized and respected so that many drugs in the same class may not be exchangeable among the same patients.

Regenerative medicine is capable of producing modified cells, tissues and even organs to renovate the body and make it more functional.

With all these variables, the medical practitioner is surrounded by a whole team of highly sophisticated professionals; medically qualified or others, who are supposed to make his practice more precise, more accurate, more safe and above all more responsive to patient needs as well as satisfying to the patient.

The time has come to look critically at our training and medical education to make it more accommodating and more responsive to these changes.