Integrating humanities with Medicine: Why we should learn History of Medicine?

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Introduction

History tells us about the chronological significance of events and human endeavours to tide over circumstances of challenges in pursuit of survival of the mankind. It also marks milestones of the human existence on the planet, provides excellent lessons to learn, and analyses socio-geo-political past to enable prospective thinking on better alternatives. Human beliefs concerning the causes of diseases, varied attempts of remedial medical measures in different parts of the world, past and present, are so important to appraise current systems of medicine. Development of modern surgery to the levels of robotic and AI integrated, improved methods of medical diagnosis and instrumentation / imaging, and the best use of medical statistics are certain examples to hang on to.

Evolution of Medicine in tune with discoveries

Human beliefs about the causes of disease followed a logical progression from supernatural causes such as the wrath of the Gods, to natural causes, involving imbalances within the human body[1]. The invention of the microscope led to the discovery of microorganisms of which many were eventually identified as the cause of infectious diseases. Identification of the particular microorganism causing a disease led to immunization against the disease. Modern surgery only developed after the ending of the taboo against human dissection and the discovery of modern anaesthesia and the induction of anti-septic and aseptic practices. Modern diagnostic methods began with the discovery of x-rays and the invention of extremely useful medical scanners. Improved mathematics, especially in probability theory, led to statistical studies which in turn led to a much greater ability to identify the causes of disease, and to evaluate the effectiveness of treatments. These discoveries all occurred in a necessary and inevitable order with the easiest discoveries being made first and the harder discoveries being made later. The order of discovery determined the course of the history of medicine and is an indicator of how social and cultural history has to follow a particular course determined by the structure of the world around us.

What's compelling?

Mankind lives in a global village where many systems of medicine are thriving, arguably Modern Medicine catering to the larger population. And there is Ayurvedic Medicine, Traditional Chinese Medicine, Homeopathy, Sidha, Unani, Acupuncture, Chiropractice, Herbal Medicine and a host of other systems being practiced in varying proportions. In the backdrop of the history of medicine, any system of medicine can learn a lot to proceed further and perfect respective medical practices for effective futuristic healthcare options.

Historical surge and renaissance in medicine

Historically, there existed Chinese medicine, Indian Medicine, Greco-Roman

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Medicine, Egyptian Medicine, Arab Medicine, Oriental Medicine and Medieval European Medicine to explore and unearth facts that are interesting and guiding a medical genius. Renaissance revolutionized the very outlook on various facets of life, medicine was no exception. While the Hippocratic approach was blended with magico-religious, astrological and folk medicine; theories in the circulation of the blood, germ theory of disease, Jenner's original works and induction of vaccination, discovery of anaesthesia, discovery of anti-septics and antibiotics added momentum in an unprecedented manner in the annals of history. Of late, diligent application of medical statistics, inducting diverse diagnostic technologies and the progress of modern surgery were certain other domains that cemented the so called scientific medicine.

The paradigm

History of medicine in addition tells us how the environment relevant to medicine has affected the course of history of medicine. The relevant environment includes the knowledge of human body, how the human body works, the diseases that attack the human body, how the materials in the environment affect the human body and how the body reacts to disease and injury. If the human body was 'different' in each instance, then the history of medicine would have been different.

Galen's humoral theory, fundamentals of Ayurveda and traditional Chinese theories were based on the human body and how it behaved in sickness and in health. If the body was different, then those theories would have been different. Anaesthesia was only possible as materials in the human environment had the property of making people so unconscious that they could not feel pain. X-rays were only possible as electro-magnetic energy of a certain wave length will pass through matter of low density but not matter of high density. Modern endoscopy is only possible because light can be made to travel around corners and thin lenses of air provide excellent light transmission. The use of anti-biotics is only possible due to bacteria killing organisms existing in the human environment and the ability to create compounds that will kill bacteria. If there was no immune system then modern treatments such as immunization would not work and would not be available

Expanding the scope of medicine

The properties of materials and matter and forms of energy in the environment ultimately determine what is possible in medicine. When knowledge of the environment relevant to medicine changed, this resulted in new theories, such as the brain being the centre of thought and emotions rather than the heart, the circulation of the blood christened as cardio-vascular system and the germ theory of disease. These ideas were the logical explanations of the new knowledge that human beings had acquired, just as the previous theories were the logical explanations of the knowledge humans possessed at those times. Increasing knowledge of the environment relevant to medicine, also led to the development of new treatments such as anaesthetics and the treasury of new drugs. The new theories and treatments inevitably had significant social and cultural consequences, such as greater life expectancy, reduced suffering and different attitudes concerning religious beliefs, all of which would themselves result in further social and cultural consequences.

Where taboos existed against the acquisition of new knowledge, such as the taboo on human dissection, then the acquisition of new knowledge will be delayed until the taboo is removed. This, in the case of medicine, meant erroneous ideas of human anatomy and physiology continued for as long as the taboo remained in place. Only after the taboo was lifted was it possible to make the anatomical discoveries of Vesalius and for Harvey to discover the circulation of the blood. 'By the historical method alone can many problems in medicine be approached profitably.'22

Technology with cutting edge in medicine

History furthermore tells us the close association of science and technology contributing to Medicine. At the same time, it provides us evidences to incorporate elements of human values and humanities into the practice of medicine. There has been a tendency in recent times to distinguish rather deliberately between science and the humanities, as if they possess entirely different agendas and methods or constitute entirely different intellectual cultures. While science and medicine appear to offer more reliable accounts of the natural world and its problems, the humanities seem to deal only with subjective and often unverifiable aspects of personal and public life. As a result, historical, philosophical or literary studies of medicine and science have often been divorced from the pursuit of clinical knowledge, improved health policies and better treatments. For a number of reasons it is a mistake to impose a distinction between medicine and history in this way. In the first instance, the notion of history has always been integral to clinical methods.

Integrating patient's history with the tenets of humanities

From ancient to modern medicine, students have been taught to consider the patient's history from various perspectives: the history of current symptoms; the patient's past medical, occupational and social history; and

the family (and increasingly this means genetic) history. Personal and biological, as well as collective and psychosocial, histories have thus been central to the processes of accurately diagnosing disease and formulating appropriate treatments and policies. Second, as both historians and doctors have pointed out, history also constitutes a vehicle for educating, inspiring and humanizing medical and nursing students who might otherwise succumb to the brutalizing effects of regular exposure to disease and death.

Perhaps more contentiously, research in the medical humanities allows us to recognize the power and limits of medicine and to acknowledge the cultural, social and political, rather than merely technical, obstacles to health promotion and disease prevention. By exploring the human aspects of medicine and tracing the development of medical theories, policies and institutions across time, medical history can reveal invaluable data that are crucial. Well done, study of history of medicine reflects and shapes far wider historical currents and the extent to which experiences of health and disease structure our lives. More broadly, while science can uncover many of the mechanisms underlying patterns of health and disease, it is the humanities that can more effectively reveal the meanings of our experiences of pain and suffering. Medical history and the wider humanities, like the biomedical sciences, should therefore be integral to our search for health and happiness.

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