

LETTER TO THE EDITOR

Clinical Examination or Investigational Medicine: The Modern Conundrum

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"Listen to your patient, he is telling you the diagnosis"

–Sir William Osler

In medical school, all budding doctors are taught the paramount importance of clinical examination. I still remember my first bedside clinic as an undergraduate. Our Professor in Internal Medicine taught us the nuances of proper history taking, followed by inspection, palpation, percussion and finally auscultation. Laboratory-based investigations, imaging, and other special tests were to be done on an as-per-need basis, he said. A bunch of wide-eyed students crowded around him as he elicited shifting dullness and demonstrated clubbing. It was so exciting to see him as he expertly reached the diagnosis within a few minutes. I was awe-struck.

After I graduated from medical school and entered clinical practice, I realized to my dismay that it has never been an ideal world. Busy physicians rarely have the time or inclination to take a detailed history or perform a thorough examination. Long queues in the OPD meant that often a patient with cough would be asked to get an X-ray of the chest first rather than be auscultated or a patient with fever sent to the lab for blood tests straight away. So what brought this paradigm shift in the approach of doctors towards patients over time? Is it lack of time, heavy patient load, monetary benefits or just a matter of convenience? There is no single answer to this riddle, as we will realize in the coming paragraphs.

Examination of common illnesses dates far back, from the time of origin of man. The human species evolved around a million years ago, and since then every tribe or settlement had a healer or shaman who used experience

and common sense to diagnose illnesses. Diseases were considered signs of divine displeasure or curse that could be alleviated by offerings to the supreme being.

The period from 3000 to 800 BC saw improvements in medicine at the hands of the Mesopotamians, Egyptians, Indians and the Chinese. The importance of palpation of the pulse was well known to Indian and Persian physicians.¹ Sage Kanada (600 BC), an ancient Ayurvedic physician (Fig. 1), in his treatise, "Science of Sphygmica", describes a range of pulses during different physiological and pathological states.²

The modern era of medicine was ushered in by the 4th century BC. Hippocrates laid the groundwork by establishing medicine as a vocation and declared that it has a sound scientific basis.³ He laid great emphasis on history taking and proper examination. Auscultation was practiced during the Hippocratic period by the direct application of the ear to the patient's chest and abdomen (Fig. 2). This was a process known as "immediate" auscultation. This technique remained unchanged for thousands of years until the invention of Stethoscope by Laennec in 1816 (Fig. 3). This was a major event in the development of clinical examination and till this day, the Stethoscope is considered the symbol of a doctor. Auenbrugger discovered percussion and published his findings in his paper "New Invention by Means of Percussing the Human Thorax for Detecting Signs of Obscure Disease of the Interior of the Chest" in 1761.³ Another seminal event was the invention of the sphygmomanometer by Samuel von Basch in the year 1881.

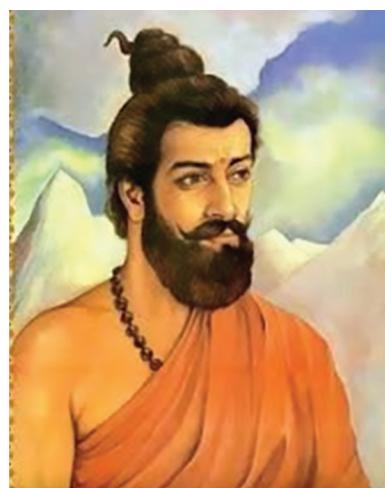


Fig. 1: Indian sage and philosopher, Acharya Kanada, considered to have developed the technique for palpation of pulse (Public domain image)

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Fig. 2: Sketch taken from Feer's Textbook of Pediatrics (1922), showing the direct method of auscultation being used on an infant (Public domain image)

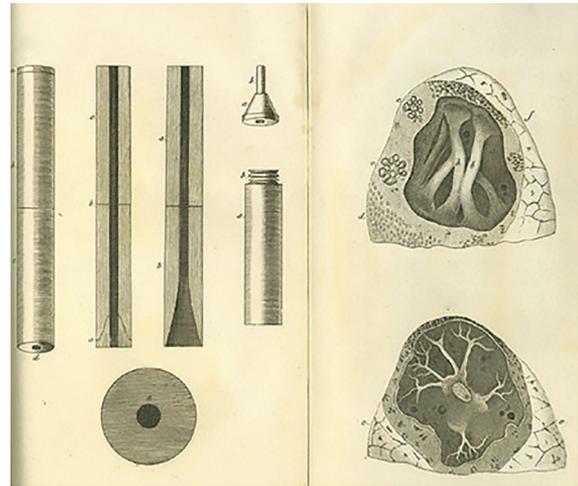


Fig. 3: Laennec's drawings of the first stethoscope (Public domain image)



Fig. 4: W Rontgen took this radiograph of his wife's hand on December 22, 1895. It is the world's first X-ray (Public domain image)

At the beginning of the 20th century, the technique of clinical examination was at its peak. The physician with his armamentarium of clinical tests and basic gadgets could now confidently diagnose common illnesses.

However, in the last century, there has been an explosion of medical discoveries to tackle newer, more complex diseases. Never before in the one million years of existence of human kind, have we been able to accomplish such feats. It started with the discovery of X-rays in 1895 by Wilhelm Rontgen (Fig. 4). This was followed by the advancement of microscopy techniques, Sonography, CT scans and so on. Molecular biology techniques have developed which are highly accurate and affordable. Imaging makes visualization of deep-seated pathology possible almost instantaneously.

As the techniques of diagnosis have become more and more accessible, so have increased the problems faced by doctors. High patient load, early burnout, inadequate teaching in medical colleges, frequent litigation, has made time scarce and the physician wary. Since there is little scope for error or delay, it is but natural that the doctor

would like to take his pathology, radiology or microbiology colleague in confidence. Over time, this approach leads to over-reliance on modern investigation and loss of confidence in clinical capability. Reports by O'Leary et al. state that hospitalists in America spent only 18% of their time obtaining histories and performing physical examinations on new patients.⁴ Verghese et al. went on to conclude from their questionnaire-based study that almost 63% of diagnostic discrepancies were because physical examination had not been performed, leading to delayed or incorrect diagnosis.⁵

The position of doctors in the 21st century is uniquely privileged. We have the firm backing of thousands of years of clinical information and the most advanced technology seen by mankind is available at our fingertips. We must take a collective decision to not let this opportunity slip by.

The rational approach would be to maintain the right balance of clinical evaluation with judicious use of modern investigations. Only then will we be able to provide the best care possible for our patients.

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