

The rejuvenation of clinical medicine in tie up ith molecular and translational research

The medical research has got many new wheels to its structures in last two decades. These are 'genetic', 'molecular', 'translational' and alike. These new wheels have carried the medical research and practice often to a complexity and confusion when a clinician is more perplexed as he tries to be more informed. Amidst the scenario at this point of time, it seems that a so called 'elite' class of physicians has emerged to grab the glamour with the new and the so called 'molecular and translational' science in their hands. This new medical science seems to have overwhelmingly defeated the traditional knowledge to near oblivion. Sadly at times, the medical intelligentsia has somewhat surrendered to the notion that there has been no need for clinical observation; as if, all possible clinical signs been described so far are useless. As a result, the young learners of medicine have started to believe that it is an utter wasting energy on looking for a disease and its clues or evidences in a patients. Hence, they look at the reports of the investigations for a diagnosis. The clinical pearls from a teacher's experience in the present issue of the journal aptly and amply elaborate the importance of clinical signs in the diagnosis and management of patients.

To be frank enough, the clinical medicine has elaborated different signs and symptoms that helped clinicians to diagnose and assess a disease and differentiate it from its clinical contenders (differential diagnosis). Now, with the advent of the 'molecular and the mechanistic' research, a new challenge has appeared to validate the relevance of clinical medicine once again.

One can forward several examples. Our knowledge of clubbing has been remaining almost static for over last 40 years and hardly anybody looked at this clinical sign as something that need re-exploration for the sake of understanding of a particular disease. Similarly, learning pulse should have included using many modern gadgets to appreciate its micro details to understand a patient, a disease, or a development. If it comes to something like the 'Newton's laws' in biology or human physiology, I am sure, all the pundits will agree to that the body is a single synchronous and harmonious manifestation of many organ systems acting in a wonderful synergy. Hence, any disturbance at any corner of the body would make that to be felt at any point of the body provided we learn to appreciate that change. Whatever subtle it may be, the sign is certain to be there.

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Therefore, if there are 'n' number of metabolomic markers or 'n' number of SNPs (single nucleotide polymorphisms) for a particular disease, there is no reason to throttle the idea that there are equal numbers of clinical signs with equally significant predictive powers. Now, the time has come to develop and welcome a "inclusive medicine" through the integration of the developments been achieved by the humanity in the different stems of science and technology. This includes elimination of compartmentalization and integration of molecular science with physical and clinical sciences through marriage of biology with electronics, genetics with imaging and alike. Our ancient predecessors both in China and India learned the science of diagnosis through simply feeling the pulse for a long time (1, 2, 3) (the knowledge may still exist at places) and we happened to be callous enough to destroy the science in insensitivity in the name of 'modernization'. The Indian system of clinical examination had a special place of understanding '*nadi*' or pulse for diagnosis of diseases. Now is the time, perhaps, to understand pulse in the light of modern technology. Incidentally, with piezoelectric pulse analysis, it has been possible to see the three distinct pulse wave patterns in the three pathological defects (*dosha*) as '*vata*', '*pitta*' and '*kapha*' described in *Ayurveda*, the ancient Indian healing science. (4) This is totally a new paradigm of understanding pulse but it appears as just the beginning. The students spend hours to identify the third heart sound through auscultation; now we should assist them with technology to listen and diagnose better.

Examples are in galore; what we need it to open the eyes, think out of the box, shun the narrow skewed ideas of inculcating science, and integrate all the developments in knowledge holistically for the welfare of the humanity.

1. *Dharmananda S.* The significance of traditional pulse diagnosis in the modern practice of chinese medicine. <http://www.itmonline.org/arts/pulse.htm> downloaded on 22.9.14
2. *Kurande V H, Waagepetersen R, Toft E, Prasad R.* Reliability studies of diagnostic methods in Indian traditional Ayurveda medicine: An overview. *Journal of Ayurveda & Integrative Medicine.* 2013; 4: 2, 67-75.
3. *Lad V.* *Ayurveda-Secrets of the pulse;* Lotus Press, Motilal Banarasi dass Publishers, Delhi, 2005, 10-14.
4. *Kalange A E, Gangal S A.* Piezoelectric Sensor for Human Pulse Detection. *Defence Science Journal,* 2007; 57: 1, 109-114.