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## Opinion

### Empiricism: How much, how little?

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As the middle aged gentleman slowly walked into my consultation chamber, guided by his jeans clad son, lowered himself equally slowly into a chair facing me and raised his head to meet my eyes, I knew instantly what he was suffering from. I restrained myself from pronouncing my diagnosis immediately in a triumphant manner, something what I would have done as a young physician. The age was telling on me in this way.

I recalled my teaching days, when I used to teach the young undergraduate medical students in their first year of clinical medicine. While telling them about the probabilities of arriving at a correct diagnosis, I would always tell them that it was a broad spectrum, at one end of the spectrum being a few conditions which would announce themselves as the patient entered the physician's office and at the other end being a few conditions which would defy diagnosis even after extensive investigations. The condition, which I always quoted as an example for the former category, was Parkinson's and that is exactly what this middle aged man was ailing from.

After a brief examination and after seating the patient outside my office, I told his son, as gently as I could, 'I am sorry, but your father is suffering from a serious neurological problem called Parkinson's disease'. I half expected his son to be deeply impressed by my diagnostic abilities. Instead, there was an expression of disbelief and dismay and he said, 'But doctor, I have read a little about Parkinson's. I do not think that you should make the diagnosis of such a serious disease so off handedly'. He

expected me to order for a full gamut of laboratory investigations including imaging studies. As an old timer, I had always believed in empiricism, at least to a reasonable degree, to save time and expense, something eminently suited for the situation in our country. In this consumer driven scenario, it was time that I did a little rethinking on this subject.

Other day, one of the medical professional representatives from a renowned diagnostic laboratories, introduced me to their 'Fever panel' - a group of investigations performed in a case of P.U.O. I was simply thrilled to say the least. A case of P.U.O. has always been a nightmare for me and here is a wonderful aid in such a dreadful situation! But, the condition appeared even more dreadful when he told me the cost of the 'panel' which was somewhere around Rs.10,000! Again here is something to think about empiricism.

It needs no imagination to say that the practice of medicine was completely empirical in the beginning. It was the growth of technology keeping with the pace of science that added newer and newer tools to the diagnostic kit. As the kit grew larger and larger, there was a reciprocal diminution in the empiricism. We are now at such a stage that the evidence based medicine has become the in thing and the need of the present day society. We definitely have not reached a situation to practice completely evidence based medicine. Even today we have no diagnostic tool for as simple and as common a condition as migraine. For that matter, even for such fatal conditions like rabies and tetanus we do not have simple diagnostic tests. The available tests for these conditions are quite

complicated and ironically, such facilities are available in hospitals which see only a handful of cases of rabies in a month or even in an year while the primary health centers serving rural populations where rabies is a common problem cannot avail these tests. But then, what do we do after confirming rabies, at least, as far as the patient is concerned?

With the consumer protection laws, the physician is put on guard and for his defense he is obliged to ask for a lot of unwanted and unnecessary investigations. More often than not he could have managed without many of them. The expense involved for the patient is taking lesser consideration.

Now, coming back to the instance of Parkinson's disease, of course, it would be prudent to ask for many of the investigations including ceruloplasmin estimation whether one saw the possibility of Wilson's disease or not from the point of view of protection from CPA, but honestly, are they necessary in every case? The reason we resort to this attitude is entirely due to the diffidence we grow up with. Only the best of the physicians who keep honing their clinical skills can feel confident and practice a perfect blend of empirical medicine with evidence based medicine.

The same goes for the second instance I have quoted, that of P.U.O. It is indeed tempting to ask for a fever panel in P.U.O. But, at what stage of the illness one should ask for it is still not clear. Asking for it even as early as during the first week may not be justified, as the titers of the antibodies would be quite low. Waiting for a couple of weeks routinely might turn out to be a regrettable error if the illness turns out to be Leptospirosis. May be the availability of antigen based PCR tests, particularly those which detect live and multiplying organisms would prove to be beneficial and deserve the high cost involved. What do we do until they are available?

I have so far discussed the empiricism in diagnostic medicine. What about empiricism in therapeutics? The situation is much the same if not worse. While there is no place for empiricism in therapeutics with well defined and established practices such as anti tubercular therapy, there is much to be said about in other situations- to quote - many of the drugs are being promoted as hepatotropic drugs or neurotropic drugs without convincing clinical studies.

In conclusion, we can safely say that the practice of medicine at the extremes of empiricism and evidence based medicine are not entirely desirable. Every physician should keep his clinical skills finely tuned and also acquire a well-balanced view of the utility and futility of any newly introduced diagnostic and therapeutic tools.