

EDITORIAL.....**An Overlook of Evidence-Based Medicine**

Evidence-based medicine (EBM) is a process which applies the best current evidence in clinical decision making for the treatment of patients. This evidence is based on meta-analysis and systematic research in which information from MEDLINE and medical literature is integrated. By using these results, practical guidelines and helpful recommendations can be developed for physicians to help them choose the best treatment options.^[1,2]

The history of randomized trials goes back to 1940. The concept of EBM was first expressed by Professor Archibald Cochrane, which resulted in the establishment of Oxford Cochrane Center in 1992. The integration of clinical expertise with the definition of evidence-based practice was done by Dr. David Sackett.^[2,3] Today, EBM practice courses and educational programs have been designed for both undergraduate and postgraduate students.

One of the fundamental instruments for the development of science is evidence which eventually takes place in scientific trials and publications. When we try to find out the best solution to a clinical problem, we are faced with large numbers of articles in medical databases. This makes it difficult to decide on the most relevant and useful treatment for our patients. Because the information sources are growing enormously, we can become confused by the contradicting results produced by the vast amount of research.

Evidence-based medicine focuses on a clinical topic by searching all relevant literature in the medical database. In this way, the evidence for a particular subject is collected.^[4]

There are some main steps in the EBM process. Initially, we need to identify a question which arose from a clinical problem and then start to search the medical literature for an answer. The analysis process incorporates selecting the appropriate articles, critically appraising them for clinical use and validity, interpreting them, integrating them with clinical expertise, and finally implementing the evidence for the clinical condition.^[5] To achieve the best results, the evidence pyramid is usually preferred. The foundation of the pyramid begins with expert opinion and is followed by clinical trials (case reports, case control studies, cohort and randomized studies). The top of the pyramid consists of the systematic reviews and meta-analysis.^[6] After all, the goal is to use EBM in clinical practice, and any recommendations are offered in light of the valuable evidence obtained.

We all seek to do our best for our patients. Correspondingly, we work hard and are busy, regardless of being whether we are employed in public or private clinics. Evidence-based medicine saves us time by allowing us to read systematic reviews and meta-analyses in a specific area and helps us in the decision-making process. Expert opinions alone may be outdated and fail to provide the best results as knowledge is rapidly changing. Essentially, we have to remember that integrating clinical expertise and the current best available evidence enriches our clinical skills in the treatment. Moreover, we have to ensure it is updated.

In the near future, our clinical discipline will be inevitably affected by an ever expanded spectrum of physical examinations, diagnostic tests, physical therapy modalities, and medical treatments from the development of EBM. Since EBM relies on critical thinking, it implies both positive and negative contributions.

Having only a few randomized trials may not constitute the best evidence. In turn, this may alter the accuracy of the information and may provide insufficient answers to our questions. Low validity trials, bias, and conflict of interest are other commonly observed problems. Also, most journals do not publish articles with negative results, even though these supply valuable contributions to science. An additional limitation is that most studies do not include patients with comorbid conditions, although we routinely deal with these in our daily clinical practice.^[7,8]

In the near future, EBM will maintain its usefulness and probably be increasingly adapted for use in educational programs. It will prove to be even more beneficial to our health care system and be used for the development of social strategies in rehabilitation medicine. The days of payment restrictions in medication and physical therapy modalities are not too far away in our country as EBM seems to be accepted as a crucial part of health economics and the social insurance systems around the world.

We all have to appraise our critical thinking and interpret our information in view of EBM. Academic professionals take great responsibility in the accuracy of scientific research; therefore, we must train young physicians and track the process precisely. Scientific ethical principles should be taken into consideration and should be immediately implemented in educational programs and courses.

Finally, we have to keep in mind that routine diagnostic tests or treatment modalities will continue to be questioned in the near future; thus, we have to conduct our research in light of highly valuable, effective, and valid statistical methodologies related to our chosen discipline.

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