Evidence Based Medicine: Which Direction Should We Go?

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A lRazi (Rhazes 865-925) in his book (Alhawi Fi Al Tibb) described the best clinical practice as the practice that has been agreed by practitioners and supported by experiments. Ibn sina (Avicenna 981-1037) in his book (Alqanun fil tibb) listed several principles for studies evaluating new medications. These principles include the need for the drug to be tested on a well defined disease, the effect of the drug must be seen to occur constantly in many cases, and the study must be done on humans, for testing a drug on a lion or a horse might not prove anything about its effect on man. All these principles are still valid in the era of evidence based medicine (EBM). In 1992 a group of researchers from McMaster University started to use the term "Evidence-Based Medicine". They wrote a series of articles in collaboration with the Journal of the American Medical Association (JAMA) where they established the principles of the concept of EBM.

EBM can be defined as the integration of best research evidence with clinical experience and patient's values. "Best research evidence" depends on the type of clinical question asked by the health care professionals, if the question is about a therapeutic intervention, best research should be derived from a randomized controlled trial (RCT) or a meta-analysis of randomized controlled trials. However if the clinical question is about prognosis, best research should be derived from cohort studies. In addition, best evidence should be...
derived from studies that focus on clinical outcomes rather than surrogate or laboratory outcomes, because laboratory outcomes do not necessarily predict clinical outcomes. For example, hormone replacement therapy (HRT) was shown in several observational and randomized controlled trials to reduce total cholesterol, reduce LDL and improve HDL levels. These findings encouraged several guidelines authorities to promote HRT as a therapeutic intervention to prevent cardiovascular disease. However with a large RCT evaluated clinical outcomes, HRT was found to increase the rates of coronary events and strokes.

"Clinical Experience" is still important in the era of EBM, mainly in the integration of evidence into clinical practice. "Patients' values" including quality of life has a special focus in the era of EBM; however quality of life needs to be studied and evaluated using sound research methodology rather than assumptions. For years, proponents of HRT suggested that HRT will improve quality of life for postmenopausal women, however HRT did not improve quality of life in the majority of women enrolled in the HERS and WHI trials, with a small improvement in quality of life among women who had moderate to severe postmenopausal symptoms (12-15% of participants).

In this edition of the journal, Al-Faris et al had described their experience of teaching EBM in King Saud University. The majority of the students (98%) found the EBM module helpful in their clinical practice and thought that EBM is important for their career. The message is that Saudi medical schools are required to promote and encourage their students to learn EBM practice. It is time to put EBM as one of the required competencies of tomorrow's doctors and this goes with the recommendations of several international organizations in the field of medical education, including among many others the Accreditation Council for Graduate Medical Education (ACGME) and the General Medical Council, who have called for the integration of the concepts of EBM in the undergraduate and postgraduate medical education. In 2005, the Saudi Commission for Health Specialties (SCHS) included the attendance of an EBM course as a mandatory requirement for any resident during or his or her training.

Finally, we would conclude by the following questions, in which direction we should promote EBM? Is it through encouraging students and physicians to attend classroom courses and workshops or lectures about EBM? Does this guarantee more EBM practice and application of practices that are evidence-based? A systematic review tackled this issue and found that standalone teaching improved knowledge but not skills, attitudes, or behavior whereas clinically integrated teaching improved knowledge, skills, attitudes, and practice. What is the implication of this finding? EBM teaching should not be confined to classrooms and workshops only; although they are an important starting point to build the knowledge base, they are not enough. It is important to integrate EBM practice into the daily care of patients in the clinical settings such as inpatients ,whether in the ward or during morning report, and ambulatory care, in order to achieve improvements in the substantial outcomes namely the skills, attitudes and behavior.
References

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