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Editorial

Evidence based orthopaedics – Western evidence in Indian context

There has been a sea change in the practice of orthopaedics in the last few decades as there have been exponential advancements both in diagnostics and therapeutics. The rapid progress in all subspecialties i.e., spine, trauma, arthroplasty, arthroscopy, etc. have offered the patient with the best available treatment choices. Minimally invasive surgery and day care surgery has improved the quality of life tremendously. This combined with health awareness of the dependent clientele through electronic media has put substantial pressure on the treating orthopaedician to offer the best available in the world.

Westerners set the standards for us to follow. But, what is the best in the western world may not yet be available in India or the cost may be exorbitant. The new buzz word is evidence based medicine (EBM) which literally means judicious use of current best evidence in deciding to offer the best medical practice. This, however, has to be combined with clinician's own experience and expertise in orthopaedics. Good doctors use both individual clinical expertise and best available external evidence since neither alone is enough.¹ Without clinical expertise, practice risks become tyrannized by evidence, for even excellent external evidence may be inapplicable or inappropriate for an individual patient. Without current basic evidence, practice risks become rapidly out of date to the detriment of the patients.

Most of the medical literature available in India is from the western world where the technique and technology are evolved, tested and certified before they become available to the third world. In June 2000, the Journal of Bone and Joint Surgery introduced the quarterly evidence based orthopaedics section. The section introduces orthopaedic surgeons to recent randomized trials relevant to the practice of orthopaedic surgery published in forty-two journals other than the Journal of Bone and Joint Surgery. Structured abstracts of these studies are published along with solicited commentaries to place the evidence into context.² The Indian Journal of Orthopaedics is also highlighting a new section entitled "Evidence Based Orthopaedics: Tips for clinical practice", for its readers. This novel section of the journal will publish concise practical tips for reviewing the orthopaedic literature. A further enhancement in journal includes "Evidence Scan", a section aimed to provide an evidence summary of one or two highly important recent

publications in the field.³ Higher level of evidence should be more convincing to surgeons attempting to resolve clinical dilemmas.⁴ As randomized controlled clinical trials are not always possible, level I evidence may not always be available.^{5,6}

With this easy accessibility of evidence, the point of discussion is whether the evidence available in the west is applicable to India or not. The answer is both 'Yes' and 'No'. Yes, if the facilities, infrastructure and training are comparable and 'No' if these are not comparable. Say for example, arthroplasty of hip and knee in the laminar flow, seamless operation theatres in the west may not be available in most of the centres in India. Another important issue concerning applicability of evidence based medicine is that the EBM era has coincided with a dramatic increase in the for-profit funding of research. Researchers funded by industry interpret their results differently and in favour of the industry product relative to not-for-profit funding.⁷ Problems associated with industry funding include use of inappropriate control interventions, surrogate outcomes, publication and reporting bias, and misleading descriptions and presentations of research findings – all forms of corrupting the evidence base. Unsophisticated users of the medical literature, assuming that medical editors, peer reviewers and topic experts have now become familiar with the tenets of EBM, may trust these manipulated research reports and advocate for their application in practice.⁸ Reliance on easily obtained but potentially misleading evidence and the increase in commercial interests to produce and interpret evidence for physicians will remain potent. To safeguard against these dangers, appropriate selection and use of EBM is indeed the need of the hour.

Therefore, one needs to ponder on how to make the best use of evidence in transforming it into good clinical practice in the Indian context. The education system should focus on training doctors in picking up the information which should have rapid accessibility, targeted to specific clinical problem, high level evidence base, portable and easy to use. The popular resources for this kind of information, which essentially provide evidence based on meta-analyses, are Cochrane database (www.cochrane.org), UpToDate (www.uptodate.com), clinical evidence (www.clinicalevidence.bmj.com), clinical practice guidelines (www.guideline.gov). This

evidence should be blended with the clinical experience of experts in the field of orthopaedics and put into practice based on infrastructural facilities available and economy of the dependent clientele. We should also develop a system, which facilitates proper research in Indian settings so that we develop our own evidence based guidelines. We should also develop comparable infrastructure and work culture as in the west so that evidence based practices can be usefully applied in our settings.

In the armed forces, the feasibility of practicing evidence based orthopaedics is more than in civil setup because of better infrastructure and clinical experience available in dedicated orthopaedic centres all over the country. It is a felt need that we should have our own research database based on data obtained from major centres located in peace as well as from centres located in CI ops. We must appropriately sensitize our younger generation of orthopaedicians in incorporating EBM in their clinical practice which should be combined with intuitive and clinical experience of senior colleagues.⁹

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