Role of Research Evidence in Clinical Decision–Making: Intuition Versus Clinical Experience Versus Scientific Evidence

In daily clinical practice, dentists are often needed to make critical clinical decisions. Overdiagnosis may lead to loss of a tooth or oral structures with or without significant morbidity, while underdiagnosis may cause nonalleviation from the disease. Both the conditions would cause sufficient economic, physical, and psychological burden to the patient. Hence, dentists are needed to take a cautionary approach. Dental learning is a lifelong process that comprises duration, repetition, and feedback. Depending on the dentist experience and qualification, the first two are often common while the feedback is one gray zone. Often, dental practices regularly seek feedback from patients, but the responses to treatment are often undocumented or unnoticed till the patient reports again for periodical checkup. If that is not a part of the treatment culture, the critical element of learning and thus the result of the clinical decision often goes unnoticed.

Learning in psychology consists of two parts—explicit learning which is an active and ever-going process by which the dentists seek the structure of information that is presented and implicit learning which is a passive process by which one gains knowledge and places it into frameworks subconsciously and utilizes it when similar clinical situations are encountered. This forms a major part of the clinical intuition.\(^1\) Intuition is “affectively charged judgments that arise through rapid, nonconscious, and holistic associations.”\(^1,2\) The cognitive process of critical decision-making relies on the explicit and implicit learning modulated by the past clinical experiences besides the other cultural, legal, and moral frameworks of the dentist. In this process, often, dental clinicians are forced to rely on the presented scientific evidences in the form of research.\(^1\)

Reading and updating recent research outcomes is expected of all medical professionals and dentists cannot stay immune to it. Imbibing the latest advancements and use of recommended protocols for suggesting best health outcomes is expected of every medical professional.

Unfortunately, dentistry, \emph{per se} has lagged to accommodate and use the benefits of structured, standardized care available in the form of evidence-based dentistry. It chooses to rely on the rich clinical experience and more unstructured, highly personalized intuition of dentists. This situation probably is due to the fact that there are much less evidences presented.\(^1\) As compared to other streams of medicine, dentistry has less number of papers and research outcomes with reliable evidences.

This factor points to the lacunae in the existing oral health care research. To cite an example is the scientific evidence for the benefit of using systemic antibiotics for symptomatic apical periodontitis and acute apical abscess in adults. It is customary to use antibiotics to alleviate the symptoms of dental pain due to symptomatic apical periodontitis and acute apical abscess. Conventional experience and intuition have always supported this practice. However, existing published literature provides only low-quality evidence. This evidence is reported to be insufficient to determine the effects of systemic antibiotics on adults with symptomatic apical periodontitis or acute apical abscess.\(^3\)

Indian dental researchers need to take active interest in providing good quality of evidence, so that clinical practice, in future, becomes more of evidence based, rather than that on the intuition and clinical experience. Similarly, reading and updating of dental research needs to be a part of the clinical practice. India suffers from a significant burden of oral diseases as well as economic constraints.\(^4,5\) In this regard, every Indian dental research publication should and shall aim to have a direct clinical implication on the way of Indian dental practice.\(^6\)

Balaji SM

Executive Editor, Indian Journal of Dental Research, Director and Consultant Oral and Maxillofacial Surgeon, Balaji Dental and Craniofacial Hospital, Chennai, Tamil Nadu, India
E-mail: smbalaji@gmail.com

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