

## A Concern for Bias

Personal preference is an inherent component in the fabric of human life. From early childhood through adult years, each individual develops a pattern of likes and dislikes which is unique to that person. This trait is revealed in attitudes, interests, and choices involving, for example, foods, clothing styles, automobiles, and personal friends. As one's personality and intellect develop, there is an inclination of temperament or outlook to focus on certain objects or points of view with a certain prepossession that does not allow the individual to respond impartially when the former are challenged. The result is a biased mindset.

Appended to the closing text of Michael Crichton's recent novel *State of Fear* is an author's message in which Crichton outlines certain conclusions he has drawn from his rather extensive review of the literature on the environment. He wrote

I believe people are well intentioned. But I have great respect for the corrosive influence of bias, systemic distortion of thought, the power of rationalization, the guises of self-interest, and the inevitability of unintended consequences.

Akin to these observations is the recent trend of (perhaps unintended but nevertheless misguided) indirect, biased bashing of the early pioneers of osseointegration and their conservative concept of a prolonged period of healing following implant placement.

Osseointegrated implants are not placed; endosseous implants are placed and become osseointegrated under optimal conditions. With the advent of treated and roughened implant surfaces and the subsequent development of early healing and stability following implant placement, apparently the importance of all prior laboratory and scientific investigation has diminished. Even though the introduction of osseointegration was recognized as a quantum leap from the prior era of human experimentation with questionable implant materials and designs, proponents of various systems have

belittled this obvious progress by repeated, out-of-context comparisons of the new surface types to machined surfaces in reports of relatively short-term case series.

While the early work with endosseous implants is meaningful as a baseline experience to which future progress in implant design and material can be compared, it is also important to be mindful of the clinical condition the early machined implants were designed to rectify, namely the edentulous mandible. For this situation, a 2-staged surgical procedure was proposed and has been successfully applied for nearly a quarter of a century.

Bias can often be seen in product research and development, regardless of support source. The rush to meet commercial competition and patient demand to lessen treatment time without inconvenience has further de-emphasized the need for scientific research into what is being manufactured and placed in human mouths. Certainly immediate 1-stage surgical and restorative procedures for situations where indicated are appropriate, and technique refinements will come with time if successful outcomes can be achieved over the long term. This does not mean that "one size fits all" or that 1-stage procedures are preferred for all patients in whom immediate implant placement is indicated, regardless of system type.

Bias has no place in scientific design and execution, the reporting of results, or appropriate—and in context—analysis of the scientific literature. The plea here is for an early return to fundamentally sound research design, appropriate statistical testing, honest reporting of results, and the statement of conclusions based only on the pertinent data emanating from the investigation. The field of implant dentistry and the patients we treat will be better served by a return to the unfettered basics.



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