



An Ancient Oath?

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I will follow the system of regimen which, according to my judgment, I consider for the benefit of my patients and abstain from whatever is deleterious.

HIPPOCRATES

The system of ethics upon which the practice of medicine in the West is based owes its roots to Hippocrates, the Greek physician who is believed to have died in 377 BC. Our precepts are to this day rooted in the oath which he elaborated. Many of us were obliged to take the modified Hippocratic Oath before being licensed to practice dentistry. However, it is not unreasonable to ask how relevant is an oath that was espoused by a physician who practiced medicine 5 millennia ago, and particularly a quotation from it, to the practice of dentistry in the late 20th century? It is no less reasonable to reply that its relevance, particularly that of the quotation heading this piece, is even more germane today than it was those many ages ago. The implications of this extraordinarily wise and timeless admonition by Hippocrates should be arresting, thought-provoking, and compelling for all involved in the many aspects of the science and practice of dentistry; they cannot be glossed over by any thinking health professional, they cannot be ignored by anyone who treasures the ethical tradition of our profession.

Exercise of judgment by the practitioner could be interpreted to be central to the concept. Collier's dictionary defines judgment as "the act or faculty of affirming or denying a conclusion, whether as based upon a direct comparison of objects or ideas, or derived by a process of reasoning." The scientific base upon which the practice of our profession rests requires that such comparison or reasoning be informed and constrained by proven fact or, where fact is lacking, by a clear understanding and recognition of what conclusions are arrived at on empirical grounds and what by guesswork, albeit, reasonably informed guesswork. And, the patient needs to be told of this. Such judgment then precludes arriving at conclusions for which there is no experimental evidence; on the basis, for example, of *ad hominem* attribution, that is, because someone respected in the profession says that it is so, or because one has dreamed up an idea that sounds promising, or because uncontrolled observations suggest the possibility of success. If one is to satisfy Hippocrates' ethical requirement, it is essential to be able to justify, on scientific grounds, the reasons for what one does, except, perhaps, in the case of a life-threatening emergency, a situation which most of us are rarely called upon to face.

It follows that if we are to "abstain from whatever is deleterious" for our patients, we must abjure the use of nonproven procedures. We must use only those

procedures that have been shown empirically to be helpful; we must be reasonably sure that they will cause no harm. This can be achieved only if we resist the temptation to "try things" on our patients; only if we resist the temptation to accept the results of poorly designed laboratory experiments and clinical trials, and of clinical treatment; and only if we resist the temptation to take at face value material that is presented at meetings or published in poorly refereed journals that report work that bears no relation to properly designed experiments and that is not quantified and tested statistically.

Most of the universities and hospitals in North America require that all experiments on humans be first approved by an human experimentation committee that requires evidence that, at the very least, the experiment not be harmful to the patient, that it be well designed, that the question be worth asking, and that the patient be fully informed both of what is being done and of the fact that they are being included in a trial. It is patently clear that, in organized health care, patients may not be used gratuitously as experimental animals and may not be included in studies without their knowledge. Indeed, in most jurisdictions, animals cannot be used for experiment without authorization by a properly constituted animal experimentation committee.

If organized health care recognizes the wisdom of Hippocrates, can those in private practice ignore it; can society expect any less of those who practice privately than it does of those who practice within the confines of its institutions? Can any practitioner justify the use of unproven procedures on private patients? Can any practitioner justify basing judgment of what is and what is not beneficial for the patient on anything other than scientific evidence of good quality? And, can any practitioner's judgment on what is to the patient's benefit be based on influences that originate commercially or out of avarice? The answer to all of these questions must be "no" if one subscribes to the Hippocratic Oath.

When the science and practice of implantology is viewed from this perspective, a number of axioms are revealed. First and foremost, no dental implant of new design or material should be placed in a human unless there is good evidence from well-conducted animal experiments and clinical trials to show probability that it will be to the benefit of the patient and do no harm. Second, no implant should be placed in a patient without the patient being informed of the risks involved, the experimental data, and the quality thereof that supports such information, and the probability of success over a given period of time. Third, to assist practitioners and scientists our journals should take pains to ensure that the refereeing of submitted papers is of the highest scientific quality and that the judgment of the referees is based on scientific quality alone and is not influenced by any other consideration. Fourth, the related scientific community is obliged to explore and elucidate the biological, material, design, and mechanical requirements for predictable and reproducible success of implants and to provide empirical criteria for the

measurement of success. Fifth, the scientific community is obliged continually to seek implant designs that increasingly satisfy the above requirements. To permit this, the referees of grant applications, consistent with those of journal articles, are also obliged to base their criticisms of applications on scientific criteria alone, and should not permit other considerations to intrude. Finally, whether we be clinician or scientist, we are obliged to put our patients' health before our own needs and aspirations.

I can think of no more apt conclusion than to paraphrase from memory the words of the eminent British surgeon, Sir Hedley Atkins, uttered some 25 years ago during the course of a lecture in London, England, on a clinical trial of the treatment of breast cancer and the ethics of such trials: "Never submit any patient to any form of treatment to which you would not unhesitatingly submit your mother, wife, daughter, or sister."

Expressed in the context of dentistry in general and dental implants in particular, I believe that if one subscribes to the Oath of Hippocrates, one's judgment of whether one should submit a patient to any treatment or place any implant, can be tested in the final analysis by asking the question: "Am I prepared to submit my nearest and dearest to identical treatment?"