

Occam's Razor Comes Against Gordian's Knot

The practice of implant dentistry appears to be gaining in complexity by the day. It started out with basic science experiments that were looking at blood flow and bone healing. Over time, a serendipitous chain of events occurred whereby it was discovered that living bone could appear on favorable surfaces and that this bone could support alloplastic devices called dental implants. The process that was observed was called osseointegration.

Early investigation into the topic led to a recognition that the use of the appropriate material with a gentle surgical procedure and the allowance for an undisturbed healing phase resulted in an implant that was solid within the bone. This implant was then used to support a dental prosthesis that was likewise treated with gentle hands in an effort to allow osseointegration to remain as a predictable procedure.

Well, that was then and this is now. The procedures that were mandated then are now thought to be too obvious. What we did in years past to achieve integration would now be thought of as too restrictive.

The question today is: Can we predictably achieve bone and implant stability if we change the rules? After all, we only want to reduce bone volume, change the implant surface, change the number of implants, modify the angle of the implants, grow new bone into which we may place implants, please everyone, and do these things, and others, in patients with chronic diseases that interfere with healing.

Can we be sure that bone will continue to form a union with the implant when the quality of the original bone is poor, when the habits of the patient may be injurious, or when complicating factors are encountered? Is it possible to use longer or shorter, wider or thinner implants to make use of the available bone? What happens when we use bone from other parts of the body or simply sneak into the dark recesses of existing anatomical structures to aim our implants into such areas, realizing that it is only the far end of the implant that is necessary for bone acceptance?

Wow! Are we saying that we want it now and want it delivered?

Is it possible that we are better at identifying problems than we are at identifying solutions? Maybe it's the case where the problem represents a situation when it is impossible to determine a solution. Maybe we are looking at ways to untie the Gordian knot.

What is that, you ask? Well, it is a complex problem that is solved only by application of the simplest of solutions. The Gordian knot may not be one that we can untie but might just require the simple approach, where Occam's razor is used to loosen the knot and, just like the rock always breaks the scissors, the razor always cuts through the knot.

A handwritten signature in black ink that reads "Steven E. Eckert DDS MS".

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