Q: Drs. Vela and Rodríguez, you refer to your newest XA abutments, developed with Sweden & Martina, as paradigm shifting. Could you please explain what has led you to this point?

A: The main concern of the clinician is to minimize the inexorable bone resorption and apical migration of the soft tissue that involves multiple problems, including esthetics and the survival of the restoration in the medium and long term owing to periimplantitis. We consider that our approach is a paradigm shift because using XA abutments and a suitable rehabilitation protocol not only avoids apical migration, but also promotes coronal migration of bone and soft tissue over time. This means esthetic improvements, as well as protection against periimplantitis.

Q: And how is that possible?

A: Basically, the protocol we apply has been improved and updated to achieve the final objective of the stabilization of the peri-implant tissue. The evolution of the concept reflects different phases of our work over the years. The BORG Center was established in 2012, and the BORG members began their clinical research in 2004, at which time we followed the standard protocol: an implant without platform switching (PS), an abutment with an anatomical profile imitating the shape of the tooth (divergent shape) and a protocol entailing multiple disconnections. However, with this approach, the tissue tended to apical migration.

Q: Apical migration means gingival recession. Did this not compromise the esthetics?

A: Of course. In fact, gingival recessions gave rise not only to esthetic risk but also to the risk of periimplantitis. We therefore evolved our protocol to an implant with PS, an abutment with an anatomical profile (divergent) and multiple disconnections. The introduction of the PS concept allowed us to reduce periimplant bone resorption.
by improving tissue stability. This concept allowed us to understand the relationship between the shape of the abutment and the stabilization of the tissue by the circular fibers of the connective tissue.

Q: You have published high-impact literature on platform switching since 2006.
A: Yes. We have preferred platform-switched restorations since we began to understand the clinical results due to the biology of the tissue. The same understanding led us to the use of straight abutments instead of divergent ones because straight abutments allowed us to increase the thickness of the tissue and improve the results in a predictable manner. We thus improved our protocol to an implant with PS, an abutment with a straight profile and multiple disconnections.

Q: But, of course, the multiple disconnections are also a concern.
A: That is true. As we have proved in many articles, every disconnection and reconnection involves the trauma of the tissue, which in turn compromises the tissue stability, and the body response is further apical migration. To avoid this tissue trauma, we advanced to our latest rehabilitation protocol: an XA abutment with a conical profile and microthreads at the base and zero disconnections or reconnections on a platform-switched implant. The use of XA abutments for threaded and cemented prostheses allows us not only to stabilize the tissue, but also to promote its coronal migration over time.

Q: So, from divergent to straight and finally to convergent abutments?
A: The conicity of these convergent abutments promotes the coronal migration of the tissue in the short and long term. The absence of margin on our marginless abutments allows us to avoid the disconnections and reconnections associated with the classical protocol of rehabilitation. No disconnections or reconnections of the abutments means no tissue destabilization. For the first time, the abutments are a guide for the connective tissue and periosteum, which in turn promotes bone growth. That is why we call it a paradigm shift.

Q: And what is the function of the microthreads?
A: Ok, here are some things that biology has taught us over the last few years. Fibroblasts and myofibroblasts are paramount to the production of the collagen fibers that surround the restoration, and science has proved that the presence of microthreads at the base of the abutment promotes the alignment of both fibroblasts and myofibroblasts. This alignment encourages the acceleration and increase of the production of collagen, resulting in collagen fibers surrounding the restoration with more predictability through the microthreads. We are talking about contact guidance, a crucial factor in biological sealing.

Q: And what about compatibility with other clinical protocols?
A: Absolutely. That is something we had been working on for a long time until we finally designed both screw-retained and cemented abutments compatible with various working protocols (screw-retained prosthesis or cemented prosthesis) for all clinical situations (anterior or posterior region, immediate or delayed loading). The apparent extreme simplicity is due to multiple biological criteria in seeking the best possible response of tissue. Its use is simple and facilitates the work of the clinician and laboratory technician. We believe it is a genuine game-changer.