

DESIGNS, STRUCTURES AND COATINGS IN IMPLANTPROSTHESIS

Description

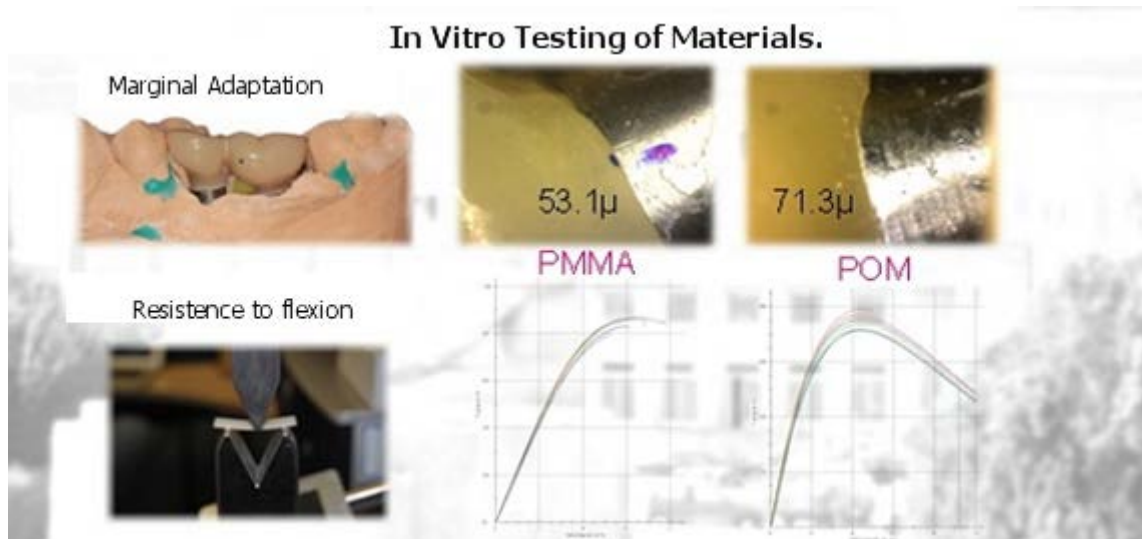
In this line we study the mechanical properties of implant prosthesis, in its different elements: structures, coatings, and connections to the implants.

In addition we analyze the sensory ability of implanted-restored patients and its clinical consequences. We studied the conventional and digital, scanners models and intraoral printing techniques.

The different techniques of preparation of implant-supported structures are tested: castings, machined, and sintered, evaluating the different materials that can be used: metals, ceramics, composites, carbon fiber, etc. In the chapter of aesthetic coatings we studied the color stability, and different measurement techniques: spectrophotometer and digital camera.

Finally, we rehearse clinically the behavior of our implanted restorations according to internationally accepted clinical parameters.

We have worked with the following companies: Voco, Ivoclar, Dentsply, Straumann, Zimmer, PIC denta, Prosthetics S.A., Procoven, GT Medical, GC, Mutua Madrileña, Mozo-Grau, Vita, 3M-Espe.



In vitro testing of materials.

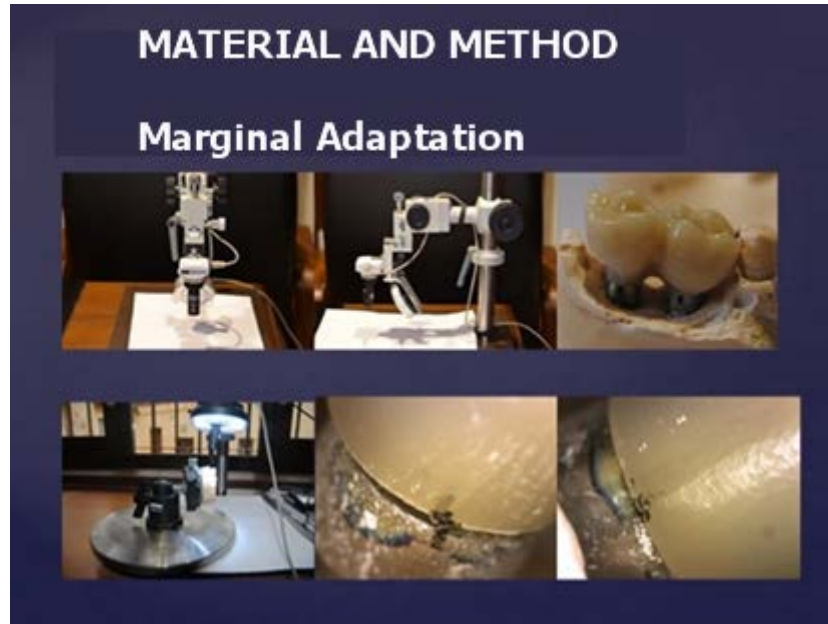
How does it work

Trials conducted for the above objectives are:

1. For structures casted, or made by cad / cam: machined, sintered or by 3D printer:
 - Strain tensile tests.
 - Aging tests "in vitro" simulating oral conditions.
 - Optical microscopy to assess structural adjustments, and surface analysis.
 - Mechanical endurance testing.
 - Hardness.
2. Electromyography, sonography Kinesiografía and patients with prosthetic implant.
3. Testing color and artificial aging in saliva and temperature controlled.
4. Epidemiological trials evaluating patients' restorations CDA criteria: Color, shape and fit. (California Dental Association).

Advantages

We offer the dental industry the opportunity to test their techniques and products "in vitro" and "in vivo" in the field of implant-prosthesis.



Material and method.

Where has it been developed

It has been developed by Drs. Del Río Highsmith, Celemín Viñuela, Martínez Vázquez de Parga, Gómez Polo and Romeo Rubio, members of the Research Group "DESIGNS, STRUCTURES AND COATINGS IMPLANTOPRÓTESIS", I Stomatology Department, Faculty of Dentistry.

And also

We are in possession of two six years terms of active research. Relations with various national and international faculties of Dentistry. Participation in conferences and seminars specialty. Mastery of scientific English. We include statistical analysis, and postgraduates for fieldwork.

Responsible Researcher

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