



MECHANICAL AND BIOMECHANICAL COMPARISON BETWEEN DIFFERENT DENTAL IMPLANT INTERMEDIATE CONNECTIONS

PhD Candidate: **Pietro Jacotti**

Email: p.jacotti@studenti.unibs.it

XL Cycle

Tutor: Professor Corrado Paganelli



Background

I have always been attracted to physics and particularly mechanics. During my university studies I got to know and learn more about implant prosthetics, a subject that is strongly characterised by mechanics as well as biomechanics. I decided as a graduation project to study a new implant-prosthesis connection in order to broaden my knowledge about this area of my discipline. Given the satisfactory result, I decided to continue my study in this PhD project by extending it to different prosthetic connections.

Objectives

The main objective of my study is to determine the parameters for choosing the best dental implant intermediate connection for both clinician and patient in order to guarantee more ease of use for the clinician and more comfort and longevity to the patient.

Methodologies

As already done for my graduation project, I intend to mechanically test prosthetic connections to verify their actual limitations [Fig. 1]. Furthermore, in order to verify the ease of use and cleansing for the patient, I intend to investigate alternative techniques for the fabrication of implant prosthetic restorations by statistically evaluating any differences with traditional techniques.



Fig. 1: traction test using Instron machine to test traction resistance of Orbit® intermediate connection

Expected Results and Impact

I expect to find not only innovative prosthetic components that could be equal or superior mechanically to traditional connections, but also components that are at the same time easier to use by the operator and easier for patients to maintain.