



ODONTOIATRIA RESTAURATIVA

17 CFU - 1° Semester

Teaching Staff

EUGENIO PEDULLA' - Module Operative dentistry - MED/28 - 3 CFU

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Office Hours: Martedì e Giovedì dalle 11.30 alle 13.30

EUGENIO PEDULLA' - Module Endodontics - MED/28 - 9 CFU

LUCA ORTENSÌ - Module PROSTHETIC DENTISTRY - MED/28 - 5 CFU

LEARNING OBJECTIVES

▪ Operative dentistry

- Discuss aspects related to biomechanics and reconstruction of devitalized teeth in relation to the endodontic treatment performed or to be performed;
- discuss restorative problems in devitalized teeth;
- analyze direct and indirect restoration techniques with and without pins;
- relate the type of restoration to the type of endodontic filling;
- understand the reason for the pre-endodontic restoration;
- treat the issue of internal whitening prevention of clinical failures.

At the end, the student will be able to understand the issues discussed and operate the post-endodontic restoration choices independently.

▪ Endodontics

The student will have the preparation that allows to recognize, deal with and solve complex cases of endodontics. In particular, the student will be able to manage endodontic emergencies and their treatment; recognize and appropriately use the main instrumental preparation techniques; recognize and properly use the substances used for root canal irrigation; learn about various methods of filling the endodontic space; managing endoparodontal diseases; plan and organize simple endodontic surgery; coordinate an assistant in the chair for conducting endodontics interventions.

▪ PROSTHETIC DENTISTRY

The educational objectives of the course are to list the principles of fixed prosthesis on natural teeth. Therapies will be evaluated in the rehabilitation of the single tooth and the treatment of the missing tooth. Particular attention will be given to the first visit and to the formulation of the treatment plan.

The course is supplemented by free student participation in local, national and international scientific events organized in the field of dental prosthesis.

The skills acquired will lead the student to develop a critical capacity on the topics covered using the skills in an active way for the purposes of prosthetic rehabilitation.

COURSE STRUCTURE

▪ **Operative dentistry**

Lectures, clinical case simulation, seminars.

▪ **Endodontics**

Theoretical lessons in the classroom, pre-clinical exercises on extracted teeth: preparation of the access cavity, root canal probing, determination of the working length, shaping with manual and rotating tools in Nickel Titanium, filling of the endodontic space, coronal reconstruction. Laboratory of materials used in endodontics.

▪ **PROSTHETIC DENTISTRY**

Theoretical activity in the classroom carried out by the teacher and practical training in clinics always under the guidance of the teacher (eg. face bow detection, study imprints, articulator setting waxes, search for the jaw-charge position).

Should teaching be carried out in mixed mode or remotely, it may be necessary to introduce changes with respect to previous statements, in line with the programme planned and outlined in the syllabus.

DETAILED COURSE CONTENT

▪ **Operative dentistry**

- Biomechanics and restorative problems and reconstruction of devitalized teeth
- Direct and indirect techniques of coronal reconstruction with and without stud
- Pre and post-endodontic restoration
- Prevention of endodontic and restorative failure
- Internal bleaching: indications and limits, materials and execution techniques

▪ **Endodontics**

Endodontic diagnosis. Pulpal pathology and periapical pathology. The pathology of necrotic pulp. Pulp vitality test.

Radiographic examinations in endodontics. Interpretation of radiographic anatomy. Anamnestic findings and preliminary diagnosis. Treatment and decision-making plan.

Anesthesia in Endodontics: Surface anesthesia. Local infiltration. Regional or troncular anesthesia. Additional anesthesia. Endodontic pretreatments.

Field isolation. Pre-endodontic restoration: biological and clinical reasons. Requirements for the access cavity. The preparation of the access cavity in the various dental elements. The access cavity in the prosthetic abutments and through the prosthetic crowns.

The location of the chamber and the retrieval of the canal entrances in the mono and multi-collars. Polar chamber grinding with passive point cutters. The ultrasonic tips for grinding the pulp

chamber.

Classification of endodontic instruments. The root canal probing with steel tools. Determination of working length: use of the latest generation apex locators. Apical limit of the preparation: anatomical, electronic, endodontic, radiographic apex.

Standardized endodontic instruments. Files, caterpillars, pull yourself together. The nickel-titanium endodontic instruments with increased taper. Ni-Ti characteristics. Coronal enlargement and elimination of interferences: Glide-path. Preparation of root canals according to the Schilder technique. The curved channels. The obliterated root canals. Treatment of teeth with vital pulp and necrotic pulp. Endodontic shaping with Ni-Ti rotary instruments and steel manuals. Sequence of use of rotating instruments in mono and multi-collars. How to prevent the separation of instruments: the splitting of work areas. Preparation and verification of apical diameter (apical gauging). Iatrogenic perforations: rational in the choice between MTA and calcium hydroxide.

Biological objectives of cleansing and shaping of the root canal system. Endodontal cleansing. Irrigating in endodontics. Rational use of sodium hypochlorite and EDTA during and after shaping. Techniques for implementing the activity of irrigating agents.

The filling of the endodontic space: biological principles, materials and techniques. Properties of filling materials. Gutta-percha. Lateral condensation of gutta percha. Vertical compaction of hot gutta percha according to the Schilder technique. I Thermafil. The technique of continuous condensation wave: System B and syringe Obtura II. The Microseal technique. Ocala therapy. Endodontic treatment of deciduous teeth and immature apex teeth. The importance of post-endodontic restoration in endodontics.

Definition of success and endodontic failure. Radicular reabsorption. Endodontal lesions.

Endodontic retractions. Removal of extracanal and obstacle barriers. Orthograde reprocessing methods. Drilling. Surgical endodontics: indications, limits and operating procedures. Retrograde filling. Radicular amputation.

The laser in endodontics. Ultrasound in endodontics. Emergency endodontics. Complications during endodontic treatments. Replanting of the tooth.

Endo-perio correlations

Endodontic therapy in pediatric patients

Endodontic therapy in elderly patients

Discoloration and internal whitening

▪ **PROSTHETIC DENTISTRY**

Surgical management with knowledge of guidelines, operating protocols related to dental prosthesis.

In particular:

- The first visit in prosthesis
- The relationship with other dental specialties
- Treatment of the anterior tooth in prosthetic therapy: formulation of the treatment plan.
- Treatment of the posterior tooth in prosthetic therapy: formulation of the treatment plan.
- Outline of dental occlusion
- Analog and virtual articulators (outline) in prosthesis
- Dental preparation techniques in prostheses

- Temporary prosthesis in fixed prosthesis: how to build it and the product category.
- Impressions in prostheses: analogue and digital techniques
- Production of impression materials and optical impression concepts
- The categories of dental ceramics
- How to perform occlusal checks
- Temporary and definitive cementation of the prosthesis

TEXTBOOK INFORMATION

▪ Operative dentistry

- F. Brenna: Odontoiatria Restaurativa. Procedure di trattamento e prospettive future. Elsevier Ed., Milano
- I. Rotstein, J. Ingle: "INGLE'S Endodontics 7" PMPHUSA 2019

▪ Endodontics

- F. SOMMA: Endodonzia. Principi di base, procedure operative e tecniche - Masson Editore, Milano
- K. Hargreaves, L. Berman: "Cohen's Pathways of the pulp" XI edition 2016 ELSEVIER
- I. Rotstein, J. Ingle: "INGLE'S Endodontics 7" PMPHUSA 2019
- M. Versiani, B. Basrani, D. Sousa-Neto: "The Root Canal Anatomy in Permanent Dentition" Springer 2019
- E. FOCE: Lesioni endo-parodontali - Quintessenza Edizioni, Rho (MI)

▪ PROSTHETIC DENTISTRY

- Elementi di occlusione. Autori: Castellani. Editore: Martina. Volume: Unico. Edizione: 1998. Lingua: Italiano.
 - Testo atlante di protesi fissa - La preparazione dei pilastri per corone in metal - ceramica. Editore: Martina. Volume: Unico. Edizione: 1995.
 - L' impronta in protesi dentaria. Autori: Gherlone. Editore: Edra - Masson. Volume: Unico. Edizione: III 2017
 - Fondamenti di protesi fissa. Herbert T. Shillingburg. Quarta edizione. Quintessenza Edizioni
 - In addition to textbooks, also the most recent and relevant teaching literature of the main medical database
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