UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Farmacologia

2627-3-H4601D014-H4601D037M

Aims

At the end of the course, students should demonstrate adequate knowledge and critical thinking skills to navigate the various categories of drugs used in odontostomatology, with particular reference to their therapeutic indications, side effects, and toxic effects.

Students should be able to:
Understand the pharmacodynamics and pharmacokinetic characteristics, including their clinical implications, of the main categories of drugs used in dentistry.
Recognize the possible causes of abnormal drug responses, understand the mechanisms of interactions between two or more drugs, and apply general principles for preventing such interactions.
Identify the main categories of patients for whom specific drugs are contraindicated or should be used with caution.
Describe the characteristics of the different groups of pharmacological agents commonly employed in dental practice, including their mechanisms of action and fate within the body (absorption, distribution, metabolism, and excretion).
Differentiate among drugs within the same therapeutic class based on their pharmacological properties, potential toxicity, and the physiological and pathological characteristics of individual patients.

Contents

The teaching module provides the essential knowledge necessary to prescribe and administer the drugs currently used in dentistry, knowing in-depth the drug composition, mechanism of action, primary and secondary effects, and therapeutical indications.

Detailed program

Phases of new drug development
General and molecular pharmacology (molecular targets of drugs, receptors and signal transduction mechanisms, receptor tolerance, dose–response curves, efficacy and potency, therapeutic index)
Pharmacokinetics (routes of administration, absorption, distribution, biotransformation, elimination, therapeutic range, metabolic drug tolerance)
Adverse drug reactions and principles of pharmacovigilance, with particular emphasis on drugs used in dentistry
Drug response, drug interactions, and pharmacogenetic aspects
Classification of medicinal products and methods of dispensing

Special Dental Pharmacology:
Drugs acting on the autonomic nervous system: sympathetic and parasympathetic agonists and antagonists
Local and general anesthetics
Anxiolytic and antidepressant drugs
Steroidal and non-steroidal anti-inflammatory drugs
Opioid analgesics
Antihistamines
Drugs acting on the cardiovascular system (antihypertensive agents, diuretics, cardiac glycosides)
Drugs affecting coagulation
Drugs affecting calcium metabolism
Anti-ulcer and antiemetic drugs

Prerequisites

Knowledge of all preparatory disciplines.

Teaching form

15 2-h frontal lessons
All lessons include an interactive part for questions and general discussion

Textbook and teaching resource

Matilde Amico Roxas "Farmacologia in odontoiatria", EDRA
Fang - Menhall "Guida pratica all'uso dei farmaci odontoiatrici per algoritmi", EDRA

Semester

First semester.

Assessment method

The exam is written (joint with Clinical Pharmacology and Chemiotherapy). It will be carried out using the "esamionline" platform and consists of open questions and multiple choice quizzes on the topics covered in class.

Office hours

On appointment write to laura.rizzi@unimib.it and elena.bresciani@unimib.it

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY