UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Emergency

2526-4-H4102D029-H4102D113M

Aims

The aim of the Emergency teaching unit is to provide medical students with a structured understanding of the pathophysiology, clinical presentation, diagnostic approach, and initial management of the most relevant renal, urinary tract, fluid–electrolyte, and endocrine emergencies.

Particular emphasis is placed on early recognition of life-threatening conditions, integration of clinical and laboratory data, and the application of evidence-based principles in the acute setting, preparing students to manage these conditions during clinical clerkships and early postgraduate training.

At the end of this teaching unit, students will be able to:

- Understand the pathophysiological mechanisms underlying acute kidney injury, urosepsis, fluid and electrolyte disorders, endocrine emergencies, and renal trauma.
- Recognize the clinical presentation and severity criteria of major nephrological and urological emergencies.
- Interpret basic laboratory findings and imaging relevant to the acute management of renal and urinary tract diseases.
- Identify time-dependent conditions requiring urgent intervention and appropriate escalation of care.
- Outline the principles of initial management, including fluid therapy, antimicrobial treatment, electrolyte correction, and hemodynamic stabilization.
- Integrate nephrological and endocrinological knowledge into a systematic emergency medicine approach.
- Apply clinical reasoning to common emergency scenarios involving renal and metabolic derangements.

Contents

Use of clinical signs, laboratory tests, and diagnostic tools to identify acute pathological conditions and guide early management, according to an emergency medicine approach focused on time-dependent abnormalities.

Detailed program

- Sepsi e shock settico: focus sulle infezioni delle vie urinarie
- Insufficienza renale acuta nel contesto dell'emergenza
- Disturbi idro-elettrolitici in ambito acuto
- Emergenze endocrinologiche e disordini metabolici acuti
- Trauma renale

Prerequisites

Teaching form

Lectures with clinical case discussion

Textbook and teaching resource

- Textbooks

- Oxford Textbook of Critical Care Medicine, 2nd edition (Oxford University Press).

- International guidelines and consensus documents, including:

- Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock 2021, Intensive Care Med / Crit Care Med (2021) – for adult sepsis and septic shock management. Society of Critical Care Medicine (SCCM)
- KDIGO Clinical Practice Guideline for Acute Kidney Injury, published 2012 – foundational guideline for AKI definition, diagnosis and management. kdigo.org
- European Association of Urology (EAU) Guidelines on Urological Infections, including sections relevant to complicated urinary infections and sepsis (2024).
- Endocrine Society Clinical Practice Guidelines on acute endocrine emergencies where available (e.g., acute adrenal insufficiency/adrenal crisis guidance – endorsed documents by Endocrine Society).

- Teaching material provided by the instructor, including lecture slides and selected clinical case discussions.

Semester

Second semester

Assessment method

Written examination consisting of 30 multiple-choice questions; an oral assessment may be included when appropriate.

Office hours

By appointment, upon request via e-mail at marco.giani@unimib.it

Sustainable Development Goals

QUALITY EDUCATION