UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Nephrology B

2223-3-H4101D260-H4101D066M

Aims

The aim of the course, organized in two modules (A and B) is to provide evidence-based knowledge of the main medical diseases of the kidney and urinary tract. Ability to define the degree of renal function, to understand the major lab and diagnostics tests and ability in defining a diagnostic pathway. Knowledge of the main methods of renal replacement therapy: dialysis and transplantation.

At the end of the course the student will be able to:

1) Know aetiology, pathogenesis, clinical manifestations, complications and prognosis of the main renal diseases.

2) Evaluate correctly patient history and physical examination in order to classify the nephropathy.

3) Interpret lab tests and diagnostic investigations in order to diagnose kidney diseases.

4) Know the main pathological pictures of glomerulonephritis, vascular, tubulo-interstitial and cystic diseases of the kidney.

5. Know the complications of kidney and urinary tract diseases and the physiopathology and clinical aspects of renal failure, including renal replacement therapy (dialysis and transplantation).

Contents

Hydro-Electrolytic Disorders

Kidney and urinary tract infections

Malformative And Dysplastic Nephropathies

Acute Renal Failure

Chronic renal failure

Detailed program

WATER AND ELECTROLYTES DISORDERS

- Sodium and fluid retention, oedema pathogenesis; volume depletion
- Hyponatremia and Hypernatremia
- Potassium and acid-base equilibrium disorders
- Disorders of calcium/phosphorus and Mg

KIDNEY AND URINARY TRACT INFECTION

- Acute and chronic pyelonephritis

MALFORMATIVE/HEREDITARY DISEASES

- Polycystic, medullary sponge, nephronophthisis

ACUTE KIDNEY INJURY

- Classification, aetiology and pathogenesis
- Clinical aspects, diagnosis and prevention

CHRONIC KIDNEY DISEASE

- Aetiology, physiopathology, metabolic alterations
- Prevention and monitoring: populations at risk, renal disease progression factors and measures to halt worsening
- Renal replacement therapy (haemodialysis, peritoneal dialysis, transplantation)

Gender differences in prevalence, clinical manifestations, outcome, treatment response of nephropathies and chronic kidney disease will be specifically addressed.

Palliative care for patients with advance chronic kidney disease and pain management in patients with chronic kidney disease will also be handled.

Prerequisites

Knowledge of Anatomy and Physiology of kidney and urinary tract

Teaching form

Frontal lessons with audio-visual aids and open discussion in the classroom, practice in smaller groups in

outpatient clinics, wards and operating rooms.

Lessons will be provided in presence, subject to any ministerial changes following the COVID pandemic situation

Textbook and teaching resource

- Harrison's Principles of Internal Medicine Ed. McGraw Hill 19th edition;

- Cecil Textbook of Medicine, 25th Edition, 2016;

- Rugarli Medicina Interna Sistematica Ed. Elsevier Masson 7° edizione, 2015;

- Johnson R, Feehally J, Floege J, Tonelli M. Comprehensive Clinical Nephrology 6th Edition**,** Elsevier 2018.

Semester

second semester

Assessment method

See Patologia Medica Chirurgica 3

Office hours

Contact the Professor by e-mail

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING