UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Nephrology A

2425-3-H4101D260-H4101D065M

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

Approach to the nephropathic patient: epidemiology, laboratory, signs and symptoms.

Renal syndromes.

Chronic renal failure. Notes on dialysis therapy and renal transplantation

Hypertensive nephropathy and diabetic nephropathy

Acute renal failure

Cystic renal disease

Glomerular diseases: primary and secondary glomerulonephritis

Kidney and plasma cell dyscrasias

Detailed program

Approach to the nephropathic patient: epidemiology, laboratory, signs and symptoms

- Epidemiological dimensions of renal disease
- Evaluation of renal function (glomerular filtration and tubular function) and urine examination
- Instrumental investigations (ultrasound, radiological investigations, radioisotopic investigations)
- Renal Biopsy
- Signs/symptoms of nephropathies: nephrological syndromes

Chronic renal failure.
-Definition of staging
-Alterations in laboratory tests
-Signs, symptoms and involvement of other organs and systems
-Notes on dialysis therapy and renal transplantation

Hypertensive nephropathy and diabetic nephropathy
-Epidemiology, clinical and laboratory of hypertensive nephropathy
-Nephrological, renovascular and nephroparenchymal hypertension
-Epidemiology, pathogenesis, clinical and laboratory of diabetic nephropathy

Acute renal failure
-Pre-renal acute renal failure: causes and clinical
-Renal acute renal failure: acute tubular necrosis and other causes and clinical
-Post-renal acute renal failure: causes and clinical
Renal cystic disease

- Autosomal dominant polycystic kidney disease (ADPKD): pathogenesis and clinical
- Autosomal recessive polycystic kidney disease (ARPKD): pathogenesis and clinical

Pathologies glomerular

- Classification and etiopathogenesis
- Main anatomical-clinical pictures of primary GN
- Main anatomical-clinical pictures of secondary GN

Kidney and plasma cell dyscrasias

- Kidney and myeloma, amyloidosis and gammopathies

The discussion will highlight gender differences in the prevalence, clinical expression, evolution, therapeutic response of individual nephropathies and in chronic kidney disease.

Furthermore, the issues of palliative care in patients with advanced chronic kidney disease and pain therapy in patients with renal failure will be addressed.

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.

Textbook and teaching resource

- Harrison's Principles of Internal Medicine Ed. McGraw Hill 21th edition;

- Rugarli Medicina Interna Sistematica Ed. Elsevier Masson, 2021;

- Johnson R, Feehally J, Floege J, Tonelli M. Comprehensive Clinical Nephrology 7th Edition**,** Elsevier.

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