UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Clinical Pathology

2122-2-H4601D005-H4601D019M

Aims

Preparation of expert odontologists by the acquisition of knowledge in the meaning of laboratory tests, their clinical and scientific relevance and their appropriate use.

Contents

Contribution of Clinical Pathology: -in promoting health at the level of prevention, diagnosis and cure, -defining the etiopathogenesis of the different pathological situations, -evaluating the functional alterations of organs and control mechanisms at the different integration of structures, functions and organism in relation with the knowledge of physiology and pathology acquired during the present year. Basic principles, arising from physiopathological knowledge, for prescription and interpretation of lab test results, hints at differential diagnosis. Knowledge about the methodology of Clinical Pathology lab, hints on collection, transport and storage of biological samples; the key role played by health operators on the efficiency of National Health Service performing appropriate prescription and interpretation of lab tests. These issues will be highlighted in the course of the systematic part described in the extensive program.

Detailed program

The contribution of Clinical Pathology -in promoting health at the level of prevention, diagnosis and cure, -defining the etiopathogenesis of the different pathological situations, -evaluating the functional alterations of organs and control mechanisms at the different integration of structures, functions and organism in relation with the knowledge of physiology and pathology acquired during the present year. Reminders of characteristics of tests and methods of Clinical Pathology Lab: Error, Precision, Accuracy, sensitivity, specificity, predictive value. Request of lab test in the NHS. Basic principles arising from physiopathological knowledge, for prescription and interpretation of test results with hints at differential diagnosis using the followed lab tests:-Anemia: Hemochromocytometric test. -Congenital

and/or acquired coagulation defects: Prothrombin Time , International Normalized Ratio (INR) Activated Partial Thromboplastin Time, Fibrinogen, Coagulation factors. -Inflammation: Erythrocyte Sedimentation Rate, C-Reactive protein. -Proteins: Electrophoresis, Specific proteins. -Immunology, Allergology: Autoimmunity Test, Total and specific IgE. -Blood group. -Liver function: Alanine aminotransferase, Aspartate aminotransferase, Bilirubine, Alkaline phosphatase, Gamma-glutamyl transpeptidase, Serological test for the detection of hepatitis. -Kidney function: plasma Creatinine, Estimated Glomerular Filtration Rate, Urinalysis. -Tumors: specific markers. Test in multi-organ pathologies: -Diabetes: plasma Glucose, daily glycemic profile, Oral Glucose Tolerance Test, Glycated hemoglobin. -Atherosclerosis: lipid profiles -Myocardial infarction: Troponin.

Prerequisites

Knowledge concerning the previous preparatory courses.

Teaching form

Frontal lessons.

Lessons will be in attendance, subject to any ministerial changes following the COVID pandemic situation.

Textbook and teaching resource

- Burtis - Tietz Textbook of Clinical Chemistry and Molecular Diagnostics Ed Saunders 2006

- Henry – Clinical diagnosis and management by laboratory methods Ed Saunders 2007

- Hovanitz – Laboratory Medicine Ed. Churchill Livingstone 1991

- Slides and pertinent bibliography

Semester

Annual course, at the second year.

Assessment method

Oral examination.

The oral examination will be preceded by a written multiple-choice test, comprising 90 questions with only one correct answer (among 4), aimed at evaluating global comprehension of microbiology program. The text will be passed with 51 exact answers, the value of each exact answer is 0.35 point.

The oral examination consists in the discussion of the remaining part of the integrated course, aimed at verifying the student ability to make connections and provide details. The final score will be the weighted mean of the two tests.

Exams will be in attendance, subject to any ministerial changes following the COVID pandemic situation.

Office hours

By appointment.