Discipline MCP5841

Methods of Research in Coronary Artery Disease: Translational Approach From the Basic Science to the Clinical Trials

Concentration area: 5131

Creation: 12/11/2020

Activation: 12/11/2020

Credits: 2

Workload:

Theory (weekly)	Practice (weekly)	Study (weekly)	Duration	Total
6	10	14	1 weeks	30 hours

Professors:

Luiz Antonio Machado Cesar

José Carlos Nicolau

Objectives:

MAIN OBJECTIVES: To develop a capacity to raise adequate hypotheses for the purpose of clinical or experimental research, foci in Coronary Artery Disease (CAD). Improve the student's critical capacity in relation to scientific publications, discussing details of the clinical application of methods, or the conclusions of clinical and experimental studies.

Rationale:

RATIONALE: Cardiovascular Diseases are the number one killer in adults throughout the Western world, leading to a huge direct and indirect costs to society. CAD, on the other hand, is the most prevalent among the Cardiovascular Diseases. It is the area, within medicine, that demands the greatest research resources in the following items, among others: pathophysiology, pathological anatomy, cost-effectiveness of strategies for early diagnosis and treatment, epidemiology, and medical, interventionist or surgery treatments. The accumulated knowledge is not enough to clarify fundamental points related to its etiology, pathophysiology and treatment, which makes continuous research in this field absolutely mandatory.

Content:

CONTENT: Although not mandatory, ideally students should be familiar with pathophysiology, diagnosis and treatment of CAD, which would facilitate him/her to follow the curriculum content, summarized in the sequence: 1- Critical analysis of the transposition of results from Basic Science to Clinical application; 2 - Proposition of new models of study in Basic Science from the questions arisen in clinical practice, with critical analysis of the current models; 3- Critical analysis of current methods of atherosclerosis research, such as analysis of endothelial function, atherosclerotic plaque anatomy visualized by standard and investigational diagnostic methods, and the evaluation of ischemia and its prognostic value in CAD; 4- Development of long-term strategies to study different aspects of CAD; 5. Critical analysis of current therapeutic strategies applied to CAD in its chronic and acute forms of presentation.

Type of Assessment:

EVALUATION: Student interest in the course as a whole, and its performance during the seminars.

Notes/Remarks:

NOTE: Minimum number of students: 06 Maximum number of students: 20

Bibliography:

BIBLIOGRAFIA, REFERENCES, BIBLIOGRAFÍA: 2016 ACC/AATS/AHA/ASE/ASNC/SCAI/SCCT/STS. Appropriate Use Criteria for Coronary Revascularization in Patients With Acute Coronary Syndromes: A Report of the American College of Cardiology Appropriate Use Criteria Task Force, American Association for Thoracic Surgery, American Heart Association,

American Society of Echocardiography, American Society of Nuclear Cardiology, Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, and the Society of Thoracic Surgeons (www.acc.org). 2017 ACC/AATS/AHA/ASE/ASNC/SCAI/SCCT/STS. Appropriate Use Criteria for Coronary Revascularization in Patients With Stable Ischemic Heart Disease: A Report of the American College of Cardiology Appropriate Use Criteria Task Force, American Association for Thoracic Surgery, American Heart Association, American Society of Echocardiography, American Society of Nuclear Cardiology, Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, and Society of Thoracic Surgeons (www.acc.org). 2017 ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation: The Task Force for the management of acute myocardial infarction in patients presenting with ST-segment elevation of the European Society of Cardiology (ESC) (www.escardio.org). 2017 ACC/AATS/AHA/ASE/ASNC/SCAI/SCCT/STS 2017 Appropriate Use Criteria for Coronary Revascularization in Patients With Stable Ischemic Heart Disease: A Report of the American College of Cardiology Appropriate Use Criteria Task Force, American Association for Thoracic Surgery, American Heart Association, American Society of Echocardiography, American Society of Nuclear Cardiology, Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, and Society of Thoracic Surgeons (www.acc.org). 2018 ACC/AHA Versus ESC Guidelines on Dual Antiplatelet Therapy: JACC Guideline Comparison (www.acc.org). 2018 Fourth Universal Definition of Myocardial Infarction (www.acc.org). 2018 Joint European consensus document on the management of antithrombotic therapy in atrial fibrillation patients presenting with acute coronary syndrome and/or undergoing percutaneous cardiovascular interventions: a joint consensus document of the European Heart Rhythm Association (EHRA), European Society of Cardiology Working Group on Thrombosis, European Association of Percutaneous Cardiovascular Interventions (EAPCI), and European Association of Acute Cardiac Care (ACCA) endorsed by the Heart Rhythm Society (HRS), Asia-Pacific Heart Rhythm Society (APHRS), Latin America Heart Rhythm Society (LAHRS), and Cardiac Arrhythmia Society of Southern Africa (CASSA) (www.escardio.org). 2013 ESC guidelines on the management of stable coronary artery disease. The Task Force on the management of stable coronary artery disease of the European Society of Cardiology. (www.escardio.org). 2014 Diretriz de Doença Coronária Estável (www.cardiol.org).