Discipline MCP5897
Critical Study of Cardiomyopathies: from Basic Science to Clinical Practice

Concentration area: 5131

Creation: 20/02/2025

Activation: 20/02/2025

Credits: 2

Workload:

Theory (weekly)	Practice (weekly)	Study (weekly)	Duration	Total
5	10	15	1 weeks	30 hours

Professors:

Felix José Alvarez Ramires

Fabio Fernandes

Keila Cardoso Barbosa Fonseca

Objectives:

The discipline will offer basic training for the study of methodological bases in the different phenotypes of cardiomyopathies. It will address basic science concepts applied to clinical practice in the universe of myocardial diseases. It will discuss a critical analysis of the complementary diagnostic methods as well as the personalized therapeutic, pharmacological and interventionist approach in the various cardiomyopathies. At the end of the course the student will be able to develop a critical reasoning of the intrinsic pathophysiological mechanisms and clinical management of cardiomyopathies, in addition to training for the development of scientific research, critical analysis of projects and manuscripts and training for teaching.

Rationale:

The advance in the molecular knowledge of the different cardiomyopathies brought new approaches and pathophysiological understandings, defining new strategies for diagnosis and treatment. The recognition of the assessment of the etiopathogenesis of the different cardiomyopathies opens up perspectives for a specific treatment of the underlying disease and not only for the manifested heart failure syndrome, which can modify the natural history of the disease. There is a gap in training courses for this type of researcher related to this area of knowledge. The topics covered, as objectives, are the basis for the development of critical thinking about theoretical knowledge, training and decision making in the face of different cardiomyopathies.

Content:

Mechanistic and practical view of the cellular, molecular, and genetic study applied to cardiomyopathies that will be performed in the research laboratory of the Clinical Cardiomyopathy Unit. Theoretical and practical discussion of the etiopathogenesis, pathophysiology, diagnosis and treatment of cardiomyopathies: hypertrophic, restrictive and dilated modules.

Type of Assessment:

The evaluation of students in this discipline will be based on the frequency of classes and the concept of the seminars

Notes/Remarks:

Minimum number of students: 05 Maximum number of students: 15

Bibliography:

Authors/Task Force members, Elliott PM, Anastasakis A, Borger MA, Borggrefe M, Cecchi F, Charron P, Hagege AA, Lafont A, Limongelli G, Mahrholdt H, McKenna WJ, Mogensen J, Nihoyannopoulos P, Nistri S, Pieper PG, Pieske B, Rapezzi C, Rutten FH, Tillmanns C, Watkins H. 2014 ESC Guidelines on diagnosis and management of hypertrophic cardiomyopathy: the Task Force for the Diagnosis and Management of Hypertrophic Cardiomyopathy of the European Society of Cardiology (ESC). Eur Heart J. 2014 Oct 14;35(39):2733-79. doi: 10.1093/eurheartj/ehu284. Epub 2014 Aug 29. PMID: 25173338. Priori SG, Blomström-Lundqvist C, Mazzanti A, Blom N, Borggrefe M, Camm J, Elliott PM, Fitzsimons D, Hatala R, Hindricks G, Kirchhof P, Kjeldsen K, Kuck KH, Hernandez-Madrid A, Nikolaou N, Norekvål TM, Spaulding C, Van Veldhuisen DJ; Task Force for the Management of Patients with Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death of the European Society of Cardiology (ESC). 2015 ESC Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death: The Task Force for the Management of Patients with Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death of the European Society of Cardiology (ESC)Endorsed by: Association for European Paediatric and Congenital Cardiology (AEPC). Europace. 2015 Nov;17(11):1601-87. doi: 10.1093/europace/euv319. Epub 2015 Aug 29. PMID: 26318695. Dadson K, Hauck L, Billia F. Molecular mechanisms in cardiomyopathy. Clin Sci (Lond). 2017 Jul 1;131(13):1375-1392. doi: 10.1042/CS20160170. PMID: 28645928. Charron P, Elliott PM, Gimeno JR, Caforio ALP, Kaski JP, Tavazzi L, Tendera M, Maupain C, Laroche C, Rubis P, Jurcut R, Calò L, Heliö TM, Sinagra G, Zdravkovic M, Kavoliuniene A, Felix SB, Grzybowski J, Losi MA, Asselbergs FW, García-Pinilla JM, Salazar-Mendiguchia J, Mizia-Stec K, Maggioni AP; EORP Cardiomyopathy Registry Investigators. The Cardiomyopathy Registry of the EURObservational Research Programme of the European Society of Cardiology: baseline data and contemporary management of adult patients with cardiomyopathies. Eur Heart J. 2018 May 21;39(20):1784-1793. doi: 10.1093/eurheartj/ehx819. PMID: 29378019. Davis MB, Arany Z, McNamara DM, Goland S, Elkayam U. Peripartum Cardiomyopathy: JACC State-of-the-Art Review. J Am Coll Cardiol. 2020 Jan 21;75(2):207-221. doi: 10.1016/j.jacc.2019.11.014. PMID: 31948651. Rosenbaum AN, Agre KE, Pereira NL. Genetics of dilated cardiomyopathy: practical implications for heart failure management. Nat Rev Cardiol. 2020 May;17(5):286-297. doi: 10.1038/s41569-019-0284-0. Epub 2019 Oct 11. PMID: 31605094.

Class type:

Presencial