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VRIJE UNIVERSITEIT BRUSSEL

PhD in Medical Sciences
2021-2022

INVITATION to the Public defence of

Andreea MOTOC

To obtain the academic degree of

'DOCTOR OF MEDICAL SCIENCES'

Role of left atrium anatomy and function in the prediction of atrial fibrillation recurrence after cryoballoon ablation

The public defence will take place on

Tuesday, **10 May 2022 at 5 p.m.**

In Auditorium Vanden Driessche
Faculty of Medicine and Pharmacy, Laarbeeklaan 103, 1090 Brussel

and will be organised online, accessible through the following link**:**

https://gf.vub.ac.be/redirects/PhD_defense_Andrea_Motoc.php

Please contact the PhD candidate if you want to attend the public defence.

Summary of the dissertation

Atrial fibrillation is the most common arrhythmia worldwide and it is associated with high rates of complications, such as stroke or heart failure, leading to impaired quality of life and increased mortality. Atrial fibrillation transition from paroxysmal to persistent or permanent is associated with worse cardiovascular outcomes, increased hospitalization rates and death. Thus, early intervention to prevent AF progression should be taken into consideration to reduce adverse events. Several therapeutic strategies for atrial fibrillation have been developed, among which cryoballoon ablation has proved increased efficacy and safety. However, a third of the patients experience atrial fibrillation recurrence after cryoballoon ablation, therefore a better risk stratification before ablation for individualized treatment pathways is necessary. The left atrium plays a key role in the initiation and maintenance of atrial fibrillation and recent studies have highlighted the complexity of left atrium anatomy and the importance of its structure and function in cardiac performance. This thesis aims to underline the role of the left atrium anatomy and function, assessed by echocardiography, in the prediction of atrial fibrillation recurrence after cryoballoon ablation. Herewith we expand the knowledge on the left atrial structural and functional remodeling in atrial fibrillation and we highlight the pivotal role of echocardiography in the baseline and follow-up evaluation of patients undergoing cryoballoon ablation.

Curriculum Vitae

Andreea Motoc was born on the 25th of January 1989 in Pitesti, Romania. She followed her primary and secondary education in her hometown, graduating in 2008 and starting her medical training at the University of Medicine and Pharmacy "Carol Davila" - Faculty of Medicine, from Bucharest, Romania, where she obtained her medical degree in 2014. In 2015, she started her clinical training in Cardiology at the University and Emergency Hospital of Bucharest. During the third year of her training, Andreea started a clinical and research fellowship at the University Hospital of Brussels. This led to the beginning of a PhD at the cardiology department of UZ Brussel, having as supervisors Prof. Dr. Bernard Cosyns and Prof. Dr. Steven Droogmans. In 2020, Andreea obtained the specialist certification in Bucharest, Romania and became a cardiologist. She continued her research work and the PhD trajectory in UZ Brussel, where she currently works as a cardiologist. Starting 2021, she has been actively participating to the activities and projects of the European Association of Cardiovascular Imaging, as a committee member of the Heart Imagers of Tomorrow. She has published more than 20 scientific articles and abstracts in international peer - reviewed journals. This PhD thesis is part of Andreea's goal to become an expert in cardiac imaging and to further advance in research.