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Prof. dr. Yves De Greef, Co-promotor

Hearth Rhythm Management Center, Vrije Universiteit Brussel
Department of Electrophysiology, ZNA Middelheim, Antwerp



PhD in Medical Sciences
2021-2022

INVITATION to the Public defence of

Juan Pablo Abugattas de Torres

To obtain the academic degree of '**DOCTOR OF MEDICAL SCIENCES**'

Atrial Fibrillation ablation: from the efficacy and safety of the second generation Cryoballoon to repeated procedures with other energy sources

The defence will take place on

Thursday, 21 October 2021 at 5 p.m.

In Auditorium Piet Brouwer

Faculty of Medicine and Pharmacy, Laarbeeklaan 103, 1090 Brussel

ADMITTANCE: Due to Covid restrictions, please contact the PhD candidate if you want to attend the public defence in person.

and will be organised online
via Zoom meeting, accessible through the following link:

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

Summary of the dissertation

The second-generation cryoballoon (CB-A) is perhaps the only device that allows pulmonary vein isolation (PVI) with a single application per vein. Our research shows that if specific procedural parameters are achieved, a single 3-minutes application per vein suffices to obtain satisfactory long-term rhythm control. Our data also show that PVI using the CB-A is an effective treatment for patients over 75 years old with paroxysmal atrial fibrillation (PAF), rendering outcomes at 1-year of follow-up similar to those obtained in a younger cohort. However, elderly patients affected with persistent AF (persAF) suffer more recurrences after PVI with the CB-A than younger patients. Notably, the complication rate is not different between both age groups. With the CB-A's increased freezing capacity, the probability of injuring the PN during the RIPV ablation also raised, affecting around 3.5% of patients. The risk is increased by the presence of a right-common ostium and during applications with a fast temperature drop velocity. After ablation it is important to identify patients at risk of recurrences. In this regard, we found that patients maintaining a high burden of PACs (> 76 PACs/day) 1 month after ablation, are at higher risk of suffering recurrences. Finally, during repeat procedures, our data shows that re-PVI without additional LA ablation confers an adequate rhythm control in around 63.2% of patients, with better prognosis if a triggering vein is found. However, persAF patients and patients who suffered a recurrence during the BP after the first PVI have a greater chance of suffering a recurrence in the long term.

Curriculum Vitae

Juan-Pablo Abugattas was born on the 11 of September of 1978 in Arequipa, Peru. He followed his primary and secondary education in his hometown at the Anglo-American Prescott school, graduating in 1995, and starting his medical training at the Saint-Mary Catholic university's medical faculty in Arequipa-Peru, where he obtained his medical degree in 2003. During the next two years, he worked as an emergency doctor in a physician-staffed ambulance service and as a doctor in a gold mine at 3850 meters above the sea level. In 2005, he travelled to Spain to participate in the Spanish "MIR examination" achieving the position 285th out of around 10,000 applicants. In 2006 he started his cardiology training in the "University Hospital of La Coruña.", finishing his training in 2011. He worked as a general cardiologist in the University Hospital of Ferrol (Galicia, Spain) until 2016. That same year he started his electrophysiology training at the Heart Rhythm Management Centre, UZ Brussel, under Professor Chierchia and Professor de Asmundis supervision. In 2018, he continued his training in the ZNA Middelheim hospital's electrophysiology department under professor De Greef and professor Schwagten supervision. Finally, in June 2019, he joined electrophysiology team at Erasme hospital (Brussels) where he is a cardiology resident. He has published more than 30 scientific articles in international peer-reviewed journals.