Abstract: P991

Safety and feasibility of pulmonary vein isolation for atrial fibrillation in morbidly obese patients with
a body mass index of more than 40 kg/m2.

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Topic(s):
Rhythm Control, Catheter Ablation

Citation:

Introduction: Morbid obesity is an increasingly prevalent disease and is an important risk factor for the
development of atrial fibrillation (AF). However, data on safety and efficacy of pulmonary vein isolation (PVI) in
morbidly obese patients are rare.

Purpose: This is a prospective registry to investigate the relationship between PVI in patients with a body mass
index (BMI) >40kg/m2 and periprocedural outcome and complications.

Methods: In patients with a BMI >40kg/m2 and drug-refractory recurrent symptomatic AF, a PVI under
general anesthesia was performed. Ablation was guided by a 3D electroanatomical mapping system (Carto 3,
Biosense Webster, Diamond Bar, CA, USA) and performed using a contact force-sensing surround flow
catheter. In all patients, irrigated radiofrequency ablation was performed to encircle each pair of ipsilateral
pulmonary veins (Figure). Entry and exit block of pulmonary veins was demonstrated using a circular hoop
catheter. Additional ablation was only performed in case of documented focal or macroreentry atrial arrhythmia.
Ablation of fragmented electrograms was not routinely performed.

Results: Between March 2014 and September 2018, PVI was performed in 35 consecutive patients (mean age:
60 ± 9 years, 47% males, 33% paroxysmal AF, mean BMI: 42 ± 4 kg/m2, maximum BMI: 54 kg/m2). Median
overall procedure time was 164 min [Q25;Q75: 143;210]. Median ablation time was 52 min [Q25;Q75: 32;64]. Median fluoroscopy time was 5 min [Q25;Q75: 4;8] with a median effective dose of 2.68
mSv [Q25;Q75: 1.24;13.52]. All targeted pulmonary veins could be bidirectionally isolated. One
patient developed an intraprocedural cardiac tamponade, followed by uncomplicated pericardial drainage. No
other complications occurred.

Conclusions: PVI in morbidly obese patients with a BMI of more than 40 kg/m2 is safe, and can routinely be
performed with procedure and fluoroscopy times that are comparable to PVI in patients with a BMI of less
than 40 kg/m2.
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