OP-099

The Use of Total Artificial Heart With Example of Cases for End-Stage Heart Failure Therapy

Serkan Ertugay[1], Özlem Balcıoğlu[1], Ayşen Yaprak Engin[1], Emrah Oğuz[1], Çağatay Engin[1], Mehdi Zoghi[2], Sanem Nalbantgil[2], Sinan Erkul[1], Tahir Yağdı[1], Mustafa Özbaran[1]
[1]Ege University, Department of Cardiovascular Surgery, Izmir, [2]Ege University, Department of Cardiology, Izmir

Introduction: Ventricle Assist Device (VAD) implantation is an alternative treatment for bridge-to-transplantation in heart failure therapy.Total Artificial Heart (TAH) implantation is another branch of mechanical circulatory support (MCS).The main advantage of this device is the possibility of both ventricular support.The current indications for this therapy are biventricular failure, hypertrophic cardiomyopathy, previous history of multiple mechanical valve replacement,malign arryhthmia refractory to treatment, massive myocardial infarction with ventricular septal rupture. In this study, our goal is to present the different examples of TAH implantation in heart failure therapy.
Materials And Methods: Total Artificial Heart (Syncardia®Cardiowest) consists of two pump (70ml volume) running with pneumatic system and two vascular graft. Implantation was performed with the excision of ventricle at the level of atrioventricular valve. Vascular grafts was anastomosed to aorta and pulmonary artery. The implantation of this device is limited to patients with body surface area greater than $1.7m^2$ and more than 12 cm sternal-spine distance. Case1: 58 years old, male, with the diagnosis of idiopathic dilated cardiomyopathy, has been hospitalized for decompansated heart failure. Patient showed signs of both left and right heart failure. (LVEF20% RVEF:20%, TAPSE:9 mm on Echocardiography. Despite inotropic support, patient developed cardiogenic shock. (INTERMACS level 1) TAH implantation was performed emergently. Case 2: 40 years old male, with history of coronary artery bypass and left ventricle aneurysmectomy, showed decompansation of heart failure. Clinical findings and echocardiographic data showed biventricular heart failure. (LVEF: 20%, RVEF 25%, TAPSE: 6mm) Despite inotropic support and IABP implantation, patient had liver and renal failure. TAH was implanted urgently. Case 3: Patient with the diagnosis of hypertrophic cardiomyopthy, was listed for heart transplant. But patient developped an severe attack of malign ventricular arrhythmia which requiring a battery change of ICD. Patient had decompansated heart failure. Although he was at level of INTERMACS 4, TAH implantation was performed due to arrhythmia.
Results: Three patient with different clinical picture of heart failure was treated succesfully with TAH implantation. In all patients chest was kept open first 3 days, and than closed. One patient was reoperated for bleeding. One patient had an transient ischemic attack without neurologic sequelae. Organ dysfunctions were completely recovered in early postoperative period. All patients are discharged and monitored outpatient without any symptoms of heart failure. DİSCUSSİON:The common treatment for heart failure therapy with MCS, is LVAD implantation. TAH, which recovers organ dysfunction with high and pulsatile blood flow, is an important alternative for heart transplant candiates with cardiogenic shock and other indications before-mentioned.

Electrophysiology–Ablation

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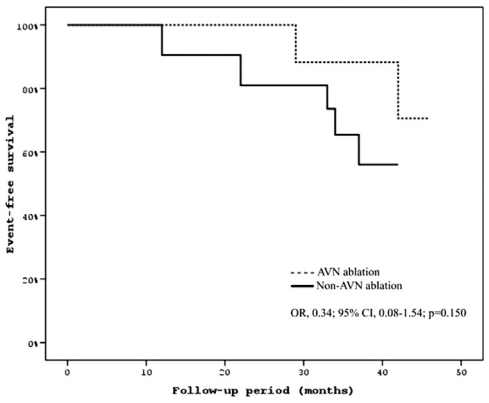
OP-100

Atrial Fibrillation Node aBLAtion and Clinical ouTcomEs in Cardiac Resynchronization Therapy (ABLATE-CRT) Trial

Serkan Çay[1], Fatih Uçar[1], Ahmet Duran Demir[2], Göksel Çağırcı[3], Serkan Topaloğlu[1], Dursun Aras[1], Sinan Aydoğdu[1]
[1]Turkiye Yuksek Ihtisas Hospital, Ankara, [2]Acibadem Hospital, Eskisehir, [3]Antalya Training and Research Hospital, Antalya

Background: Cardiac resynchronization therapy(CRT)is related with improved morbidity and mortality in left bundle branch block(LBBB)with and without atrial fibrillation(AF). No clear data is present in non-LBBB with AF.
Methods: Patients with AF and CRT (LBBB and non-LBBB) requiring atrioventricular node(AVN)ablation were assigned to AVN ablation and non-AVN ablation groups. Primary end-points were composite of all-cause mortality or heart failure hospitalization. Four-year follow-up was planned.
Results: A total of 82 patients with CRT were included. Of these, 38 (46%) had LBBB with AF and 44 (54%) had non-LBBB with AF. Ablation was performed in 20 (24%) patients with LBBB and in 22(27%) with non-LBBB. The mean age was 65 years. Males were 83%. Ischemic etiology was 51% and mean AF duration was 32 months. In all population the primary end-point of all cause mortality or heart failure hospitalization was lower in AVN ablation patients compared with non-AVN ablation patients (6.1% vs. 18.3%, p=0.007), driven by reduction in both mortality (2.4% vs. 9.8%, p=0.035) and hospitalization (6.1% vs. 15.9%, p=0.024). In LBBB patients, the primary end-point was also lower in AVN ablation patients compared with non-AVN ablation patients (5.3% vs. 21.1%, p=0.016), driven by reduction in both mortality (0% vs. 10.5%, p=0.026) and hospitalization (5.3% vs. 18.4%, p=0.036). In non-LBBB patients, the primary end-point was 6.8% and 15.9% in AVN ablation group and non-AVN ablation group, respectively.However,this difference did not reach a statistical significance (p=0.150) (Figure).
Conclusion: The morbidity and mortality benefit of AVN ablation was demonstrated in heterogeneous group of patients with or without LBBB and AF.Subgroup analysis of patients with non-LBBB and AF did not, however, show the same benefit.



OP-101

Cryoablation First theRapy OutcomeS compared to after-drug Therapy (C-Frost) Trial

Dursun Aras[1], Serkan Topaloğlu[1], Serkan Çay[1], Fırat Özcan[1], Fatih Uçar[1], Özcan Özeke[1], Osman Turak[1], Göksel Çağırcı[2]
[1]Turkiye Yuksek Ihtisas Hospital, Ankara, [2]Antalya Training Hospital, Antalya

Background: Cryoballoon ablation of atrial fibrillation (AF) is an effective therapy in maintaining sinus rhythm. The procedure is mainly recommended for anti-arrhythmic resistant cases. No randomized study is, however, present about cryoablation as first line therapy.
Aim: The aim is to compare cryoablation as first line therapy with cryoablation after drug resistance.
Methods: Consecutive patients (all-comers) with paroxysmal AF (PAF) planned for catheter ablation were randomized to cryoballoon (Arctic Front Advance, Medtronic) ablation as first-line therapy without prior anti-arrhythmic drug use (n=33) and cryoballoon (Arctic Front Advance, Medtronic) ablation after at least one anti-arrhythmic drug resistance (n=23). All patients were followed-up at least 12 months. Periodic ambulatory Holter monitoring was performed to detect any recurrence at 1, 3, 6, 9, 12, and every 6 months after 1 year.
Results: The median age was 49 years. Male was 66% and 7% of patients had diabetes and 34% had hypertension. The mean follow-up period was 18±5 months and the mean procedural time was 59±8 minutes. The primary end-point of freedom from AF was found to be statistically indifferent in both groups (78.8% for first-line therapy vs. 78.3% for after-drug therapy, p=0.857) (figure).
Conclusion: Cryoballoon ablation as first-line therapy is as effective as cryoballoon ablation after anti-arrhythmic drug resistance in maintaining sinus rhythm.