

Title: Brugada Randomized: Epicardial Ablation to Prevent Sudden Cardiac Death

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Dr Carlo Pappone

"- Good morning, I am Professor Carlo Pappone, Italy. I am the Chief of Department of Cardiovascular Disease at San Donato University Hospital. The topic we are going to discuss today is Brugada syndrome therapy.

Reasoning Behind the Study

The main reason of this study was the demonstration that the ablation can eliminate the substrate of Brugada syndrome. In the past this condition was considered just an electrical disease based on the genetic predisposition. Very recently, our group demonstrated that this condition is associated with the substrate localised in the pericardial cavity. The only solution for this patient is the ICD implant. So these patients at high risk are designated to keep for the rest of their life the ICD implanted limiting their normal life. The project of this study is to find an alternative therapeutic option excluding the ICD as a therapeutic approach.

Study Design and Patient Population

We randomised the patient with ICD implant and ablation and patients only with ICD implant. All the population had a previous cardiac arrest one time or more time. And we recruited the patient and randomised in two to one. So we have much more people in the ablation group than in the ICD group. And actually the results are showing that the superiority of the ablation is very clear and the patient with the ICD continue to have a lot of complication due to the lead infection, rupture dislodgement. So the ablation can become in the future the real solution for the treatment of this condition.

Key Findings

The key finding after the discovery of the substrate of this disease in the pericardial space with the 3D mapping system, we do the mapping of the substrate. We target the substrate and eliminated the abnormal electrical activity on this substrate using radiofrequency with a very simple catheter. The duration of the procedure is about one hour and the day after the patient is at home. This is the first demonstration that is possible to do the ablation in cardio genetic disease. In the past was considered an impossible target.

Impact on Clinical Practice

Most of these patients otherwise designated to die for the sudden death. In the future we'll have the opportunity to be completely cured with the elimination of the substrate responsible for sudden death. Actually, we found that in the same pericardial cavity our localised other important cardio genetic disease like long QT syndrome, early repolarisation and right ventricular dysplasia. So we are very close to the final solution of cardio genetic disease associated with sudden death. And this is the first demonstration that the ablation can prolong the life of the patient.