



TRICUSPID INSUFFICIENCY SECONDARY TO IDIOPATHIC CARDIOMYOPATHY: A COMBINATION OF STRATEGIES TO OBTAIN SUCCESS ON A COMPLEX CASE

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Introduction:

Tricuspid Insufficiency (TI) is a condition that has been in evidence with new and effective devices and good results. Torrential TI, right and left ventricular disfunction can influence the outcome, whatever strategy to treat TI is chosen. When TI is secondary to annular dilatation and the patient is not a candidate to surgery and has been submitted to previous CRT-P implant the challenges to treat such patient are enormous

History and physical:

We report a very complex case of a 75 y.o. male patient that had been submitted to a CRT-P implant 27 years ago and was referred to our hospital, 6 years ago, to evaluate lead extraction due to TI. At that time, we did not indicate the procedure because the heart team considered it wouldn't treat properly the basic cause of worsening the functional class, i.e., the tricuspid valve. Three years later while visiting his daughter who had delivered his first grandson, the patient had a cardiac arrest due to ventricular fibrillation, and was recovered immediately. We had to consider upgrading the system to a CRT-D. It did not make sense in our opinion to implant a new lead through the tricuspid valve.

Intervention:

We made the decision to implant the new system with an epicardial approach, meaning that we performed a partial sternotomy and implanted two bipolar epicardial leads (Medtronic) both in the right and left ventricle in order to maintain the cardiac resynchronization (the patient is dependent of the pacemaker function) and we also implanted two coils, one was directed posteriorly to the left ventricle and the other was directed from the generator pocket through the subcutaneous tissue pointing to the back of the patient, thus creating a dual coil system. VF was induced in the O.R. and the rhythm was recovered after the first 35J shock. The patient did not need an atrial lead because of chronic AF. We tried to extract one of the endocardial leads, but it broke in the innominate vein and we decided not to extract the leads, since our



main goal was to perform the system upgrade. The patient was discharged one week later. In 2021 his condition deteriorated due to worsening of RV function and torrential TI. WE, than, had available the TRICVALVE system (TS)

Results:

After deciding to implant the TS we had to extract the endocardial leads what was done through both subclavian and femoral approach. Both leads were extracted. Approximately two months later we successfully implanted the TS. The patient was discharged two weeks later and currently has markedly improved on what concerns the prior symptoms (hepatomegaly, lower limbs edema, dyspnea).

Conclusion:

TI is a challenging condition and we report a case that was complex and could only be dealt due to a combination of both understanding the pathophysiology and medical technology.

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