Discussion to: Non-complex ventricular arrhythmia associated with higher freedom from recurrent ectopy at 1-year after mitral repair surgery.

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Discussion to: Non-complex ventricular arrhythmia associated with higher freedom from recurrent ectopy at 1-year after mitral repair surgery.

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Dr. Matthew Romano (Ann Arbor, MI):

I have the privilege of discussing this presentation. And that was a really nice presentation, incredibly thorough. And if you need a glass of water after that, go right ahead. I think this is a very important and unappreciated topic, and we still know very little about it. And work like this is bringing it to our attention and really helping us create awareness. I just have a couple questions. Do you modify your operative or anesthesia approach for these high-risk patients, like the ones that had sudden death or sustained VT?
Dr. Dimosthenis Pandis (New York, NY):

Thank you very much. This is an excellent point. Yes, we do. So, after our patient zero, which we were very surprised that without any particular comorbidities or risk factors, she went on a VF induction, turned out to have papillary muscle scar. Our ET and anesthesia group came together. So, we're very meticulous in managing their electrolytes before and during the anesthesia. Induction is a very deep sedation, and the use of PA catheters is absolutely avoided. And of course, the use of norepi for induction before the start of propofol is avoided as well. So very, very close management of their electrolytes and hemodynamics.

Dr. Romano:

Great. One of the limitations of this is the relatively short follow-up time of a year. And it looks like the recurrence, overall, was about 24% at one year. And for those who had VT prior, the recurrence of VT was 40%. I know the overall arrhythmia burden was reduced. So, tell me a little about what you do with these patients. How do you treat-- is there any special antiarrhythmic regimen? Do they get ICDs? And did you notice any difference in the ones that you did a cryoablation of the papillary muscles that was identified preoperatively?

Dr. Pandis:

Yes, of course. So, all the patients, first of all, go home with a beta blockade or metoprolol. Now, patients that are of higher risk and have transient VT runs right after surgery, postoperative day one, they will go on an operative regime of amiodarone. If there is a continuous risk based on our consult, they will go home on an amiodarone oral regime until it's reviewed by the cardiologist. We only had one patient that required a new ICD, and that's because she had a very high burden. She didn't have VT, but she had a continuous burden of short triplets. And it was deemed safer for this patient to go home on an ICD.

With regards to the papillary muscle ablation, those that we did ablate, the burden after the procedure was actually zero at 30 days and at one year. Sorry. At one year, those that had papillary ablation, their burden was down to about 1.9%. The number of 24% recurrence and the aggregate of 40 might look higher, but I would like to draw your attention to the fact that all of the [inaudible] that we've had before in patients that otherwise underwent electrophysiologic ablation, 75% recurrence. And this is after three or four goes in trying to ablate those. So, it's impossible going that way for the VA to be abolished.

However, with this technique, even though there is a chance in those that have a substrate, like a scar and/or inflammatory myocardial injury, for the VA to recur, the burden is significantly lower. The number of ICD firing is significantly lower. So, we're pretty happy with how this type of approach
affects their natural life, the way of their symptomatic— their symptoms, and their burden of ventricular arrhythmia in the long term.

Dr. Romano:

Okay. And finally, one thing I still am having trouble wrapping my mind around is how long it took for these patients to be referred, 10 to 20 years overall. And could we have impacted this and potentially seen a lower incidence of the burden [crosstalk]—

Dr. Pandis:

Dr. Romano, to be perfectly honest, we've had these numbers for the last five years. I wasn't sure that these numbers were correct, and we didn't publish them three years ago because I was surprised at the discrepancy between the two genders. So, we kept running and running tests, making sure that we don't have the wrong numbers. The answer is yes. There is a trend of a great discrepancy for females and males to be referred generally for mitral valve regurgitation. Otherwise, it's something that we need to educate our colleagues and to make sure that these patients remain in our radar, particularly in the context of the higher demographic of young females with ventricular ectopy and the risk of sudden death.

Dr. Romano:

Okay. How about a quick question and a quick answer?

Unidentified Speaker 1:

Enjoyed your presentation. Do your patients or these patients undergo another electrophysiologic mapping to exactly find where the location is so that when you go there, you can ablate it? And for those who have LV outflow tract arrhythmias, it may not be just one spot, or the mitral valve, maybe towards the left pulmonary artery, there is valve ring. In those cases, if you have one of those, would you consider opening the aorta to ablate that area, or are you going to go through the mitral valve to do that?

Unidentified Speaker 2:

A brief answer.

Dr. Pandis:
Yes. I'll start with the last one. Yes, we do. And we actually showed a specific case of a patient who had an LVOT source between the coronary sinus and the coronary leaflets, and we did ablate right after we put the probe [right?] from the aortic inflow under the source of the ectopy. For the other question, we do not map them unless they came from the EP, and they had already undergone mapping from the EP department and unsuccessfully were tried to be ablated. There's no reason for them to be routinely mapped because our electrophysiologist, Marc Miller, is able to, most of the times, locate from the 12-lead ECG the exact location of the origin of the ventricular ectopy based on the morphology of the ectopy, if it's an RV [MBX?], if it's superior or inferior. So, it's pretty accurate so far, but the [crosstalk]—

Unidentified Speaker 2:

That's not what I mean by a succinct answer, but we really appreciate it. Listen, we're going to move on. And I'm sorry, we can't have any more questions because we've got to get to the business meeting, thank you very much. If you guys can get together afterwards, you can answer his question. Thank you very much.