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How to Build a Standardized Episode Algorithm

Announcer:

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Brian Rose

Welcome to this educational activity from GLC. I'm Brian Rose, and I'm here with Jennifer Carlquist and Sean Pokorney. Our discussion today will focus on how to build a standardized episode algorithm for the management of PSVT, or paroxysmal supraventricular tachycardia.

Sean, I'll start with you. What do the current guidelines recommend for patients who receive ablation? And what are the steps involved in managing that patient?

Sean Pokorney, MD:

Yeah, thanks, Brian. It's a great question. The most recent US guidelines from the AHA and ACC are really from 2015, and so we have somewhat dated guidelines, especially given the fact that we now have newer treatments like etipamil that are available. But specific to the guidelines that were published in 2015, ablation is really a first-line therapy for patients with PSVT. So patients do not have to have failed AV nodal blocking agents. They do not have to have failed antiarrhythmic medications to qualify for an ablation. If patients have highly symptomatic episodes that are recurrent, if patients have hemodynamic compromise, if they have preexcitation, those are all patients that are candidates for a first-line ablation procedure. That doesn't mean that all patients need to go directly to ablation. Obviously, many patients choose to try medications first, and that's reasonable based on patient preference.

I think it's important to have conversations with your patients including the different options of AV nodal blocking agents, antiarrhythmic medications, use of pill-in-the-pocket etipamil—or spray-in-the-pocket etipamil, I should say—ablation as a first-line therapy. All of those conversations should be had with individual patients. And then ultimately, once patients go on to an EP study and ablation procedure, for most of our PSVT treatments, there's about a 90% to 95% chance that the patients are cured after ablation.

But that means that a portion of these patients may have ongoing episodes that need to be either managed with AV nodal blocking agents, antiarrhythmic medications, use of etipamil as an as-needed basis, or even potentially repeat ablation procedure, depending, again, on those conversations that you have with patients.

Brian Rose, PA-C:

Excellent. Jennifer, can you tell us more about outpatient management of patients that present with PSVT?

Jennifer Carlquist, PA-C:

Absolutely. Thank you, Brian. I want to echo the sentiment of Dr. Pokorney because, at the end of the day, everything we do in pharmacotherapy for SVT is really, obviously, just a Band-Aid until they can get ablation. Some patients do okay with medical therapy and they prefer that if their symptoms are manageable with medication, and they don't want to proceed into ablation. But usually, we find that what happens is patients, unless they're super symptomatic, if you approach them right off the bat with, "Hi, let's go ahead and do an ablation," they kind of pump the brakes and they want to try something else first.

And so oftentimes, what we'll do is we'll give them a beta-blocker, or I like that pill-in-the-pocket approach. But I also feel like the landscape is changing now because we have more tools in our tool belt to reach for for patients, the Cardamyst spray being one of them. I am less likely to prescribe antiarrhythmic drugs just because patients, they tend to like beta-blockers better, but I will sometimes do that. And then I also like to teach them other ways to abort as well using vagal maneuvers, especially if they're somewhere where they're without medications, and then I do try to eventually lead them to an ablation. Because I do feel like most patients end up needing that, and I have had patients in the past who have even gone so far as to avoid traveling to be afraid to have an episode on the airplane.

But again, I do feel like we now have that quick-acting medication that we can bring in for them and give them more of a peace of mind because this really does end up disrupting patients' lives.

Sean Pokorney, MD:

Yeah, I couldn't agree more, Jennifer. I agree with everything you said. I think that the use of antiarrhythmic medications in these patients tends to be, in general, less effective than we would ideally like, especially given the risk profile of those medications in terms of those potential side effects and monitoring that's required, and so I completely agree with you, with what you said.

I think that using AV nodal blocking agents as an initial attempt, which, again, may help some patients, generally doesn't prevent the episodes completely but may decrease their likelihood. I completely agree with preparing these patients with the knowledge around vagal maneuvers. But just to sort of highlight for our audience, the data really show that vagal maneuvers work in less than 10% of patients, less than 10% of episodes, and so it's certainly something for patients to know about, and for them to be able to utilize, and for some patients, it can be quite effective. But it's still the minority of the patients that are truly able to terminate those episodes with those maneuvers.

Jennifer Carlquist, PA-C:

I agree, but it's certainly an exciting time that we do have more tools now. Because I remember when we first started in EP, it was just very few antiarrhythmic drugs and beta-blockers, and now we have all these other tools. And so I'm really excited for PSVT patients because there is hope. I feel like there's hope now.

Sean Pokorney, MD:

Yeah, and I think beyond when you say hope, and I think part of what you're getting at with the hope is that these patients now have more control over their disease state. And you talked about this, that patients really will change what they do: they'll change their activities of daily living; they change what they do with their children and their families. And really, now we have the ability with etipamil to give patients the control over their disease state, that they can terminate these episodes if they happen when they're at home.

And whether that is as a bridge to an ablation while they're waiting for their ablation procedure, whether it's during the washout period of AV nodal blocking agents around the time of ablation, whether it's that they use it after an ablation if they have recurrent episodes, or if patients have infrequent episodes and just choose to go that route in order to avoid an invasive procedure, you're absolutely right. These are all things that we can now offer our patients that we could not offer before. It was only the option of these patients rushing to the emergency department and getting adenosine.

Jennifer Carlquist, PA-C:

Suboptimal, if you can help it, right? Because there's oftentimes a period of asystole which is not optimal, and so if we have better options, why not use them?

Sean Pokorney, MD:

Yep, I agree.

Jennifer Carlquist, PA-C:

So, Brian, is there anything else that you want to add? Is there anything else that you might add into the standardized protocol for patients?

Brian Rose, PA-C:

So I absolutely agree with what you both have pointed out in great detail, that these are patients that we really have to approach in a very personalized fashion.

The one question that I actually did have for both of you is, since you are both in EP, is what advice do you have for the providers, the cardiology providers who may not be in electrophysiology or in an area that EP services may be a little bit scarce with being confident with treating this disease process?

Jennifer Carlquist, PA-C:

So my answer is—this is true for AFib and PSVT—is refer to EP early and often because you want to get them in line to see EP because even if they don't want to have a procedure right away, at least they've established a relationship with EP, and they now know our electrophysiologist. And when they finally decide, then it's a much easier thing to schedule.

And so because the waits are long, just get them on the books. Have them agree, get them in to be seen. But in the meantime, you can educate them, prepare them, give them tools. And I think that it doesn't require electrophysiology to do some of these bridge techniques that Dr. Pokorney was talking about.

Sean Pokorney, MD:

Yeah, no, I completely agree, Jennifer. As you're saying, Brian, many providers practice without easy access to specialized care like electrophysiology, and so I think that the first issue to keep in mind is that we need to make the accurate diagnosis. So when patients come in complaining of palpitations or other things, we don't want to dismiss these young, healthy patients thinking it's anxiety or other things. We definitely want to evaluate these patients in greater detail, and that can be done with a patch monitor. If these patients have more frequent episodes, if they have less frequent episodes that are symptomatic, patients can get some wearable device, a KardiaMobile, a watch that they can record strips, and then those strips can help to diagnose these actual episodes and can be quite useful.

And once we've made the diagnosis of true SVT, I think the places to start are teaching them vagal maneuvers because—although they're not universally effective and not even effective in the majority of patients, they're only effective in the minority—they can work for some patients, and so teaching them vagal maneuvers. I think the best one that I like to recommend to patients is to lay down with their butt against the wall, with their feet vertically up and down the wall, and bear down. And that sort of combines two vagal maneuvers and tends to be more effective.

I would recommend getting these patients started on AV nodal blocking agents. For most of the young patients, I actually use calcium channel blockers. They tend to be a little bit better tolerated than beta-blockers, but either one is a reasonable first-line strategy.

And then I think at the point where you're thinking about antiarrhythmic medications, then it's definitely time to get these patients on to electrophysiology.

But certainly, cardiology and potentially even primary care can start these patients on pill-in-the-pocket etipamil, where these patients can use a nasally inhaled medication at home to terminate these episodes, similar to what would be done in the emergency department with adenosine. So that's another tool that general cardiologists can use for these patients as a bridge to getting them to EP, as Jennifer said.

Brian Rose, PA-C:

We've heard today about building a standardized algorithm for the management of PSVT. Thank you for joining us for this educational activity.

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