

Four F's of AFib: Forgetfulness

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FULL TRANSCRIPT

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Dr. Allred: Hello and welcome to today's episode of the *Four F's of AFib*, where we address gaps and barriers to care for the diagnosed and undertreated AFib patient around the four key areas of concern: frailty, falls, fear of bleeding and forgetfulness. In this episode, we will focus on answering questions around forgetfulness. My name is Dr. James Allred. I'm an electrophysiologist at Cone Health in Greensboro, North Carolina, and your host for this podcast series. Today, we are joined by Dr. Miguel Leal, an Associate Professor in the Division of Cardiovascular Medicine with the University of Wisconsin Department of Medicine. Welcome to the podcast today.

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Dr. Leal: Well, Dr. Allred, it's a pleasure and a privilege to be here and participate in this podcast, which highlights such an important topic when it comes to the management of our patients with atrial fibrillation, and I really thank the American Heart Association for this important initiative and for having me here with you today.

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Dr. Allred: Dr. Leal, I understand that you have some changes in your pathway going forward. Tell us a little bit about that. Tell us a little bit more about yourself.

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Dr. Leal: You're right. It's interesting to say that after 15 years, well-spent in Madison at University of Wisconsin, I am now moving towards Emory University in Atlanta. So it's certainly a bittersweet move with a lot of friends that probably remain our friends. But we're going to move a little bit south and continue this academic journey in the world of clinical cardiac electrophysiology, including education and research as well. So, once again, thank you for having me here.

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Dr. Allred: So, the pleasure's all ours. And when I think of two really great institutions, when it comes to the space of atrial fibrillation, the University of Wisconsin, Emory University, are two really spectacular programs. And so I know that you're fortunate to have been at the University of Wisconsin, and I know that you're excited about Emory and probably some changes in weather.

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Dr. Leal: Absolutely, yes. As a native Brazilian, it was definitely a very interesting journey to spend the last decade and a half in the Midwest. Certainly, a very pleasant time in my life for our family, but it is now time to move forward. And here we go towards the southeast. Actually, I'm going to be closer to you there.

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Dr. Allred: That's exactly right. We're in North Carolina. So, as you think about forgetfulness, what are the perceived versus actual barriers to appropriate anticoagulation? And we'll talk about that as a provider as we think about our patients and also as their family and caregivers get involved. Again, what are the perceived versus actual barriers to appropriate anticoagulation for these patients?

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Dr. Leal: That is a great question to get our conversation started because atrial fibrillation, as we know, is the most common form of cardiac arrhythmia that affects men and women all over the world. And the prevalence in the United States alone is remarkably escalating. And this is not necessarily something that is surprising us because atrial fibrillation comes together with a series of comorbidities such as hypertension or high blood pressure, diabetes mellitus, peripheral vascular disease, coronary artery disease, obesity, sleep apnea, and many other comorbidities that make atrial fibrillation more likely to be present.

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Dr. Leal: And as patients have a higher percentage of these conditions, the likelihood that he or she will develop atrial fibrillation at some point in their lifetime grows over time. The problem is that this arrhythmia has the unique ability to make the patient prone to clotting, to the formation of thrombi or coagulum inside their hearts. Because the top chamber of their hearts is not pumping blood anymore. They're just essentially quivering or fibrillating, as the name suggests, and that stagnation of blood in the upper chambers of the heart, especially in certain areas like the left atrial appendage, which is this little recess in the left atrium, that has a perfect shape and contour for harboring a clot or two that may form.

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Dr. Leal: And the problem that comes from that is if this clot decides to embolize or to travel through the circulation to any part of the body, it can have devastating effects. For instance, if it travels towards the central circulation in the brain, it may lead to a stroke. Even if it does not cause a disabling stroke at first, multiple showering of emboli towards the central circulation may cause progressive loss of cognitive function. Basically, it is equating to a patient who has several mini-strokes throughout, sometimes, the course of weeks or months or years, and then he or she has a progressive decline in their cognitive function, which is something that can, at times, be relatively subtle and noticeable by people who may not be with that person every day, who visit them after a few weeks or months and suddenly realize that something is wrong. That the way the person is processing, his or her reasoning, or trying to remember things may not be as accurate as they used to be just a few weeks or months ago.

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Dr. Leal: As you know, Dr. Allred, unfortunately, there is this stigma that this is all part of aging when we know it's not necessarily the case. There are many ways to age in a healthy manner. And when somebody has this progressive decline of cognitive function, which we're going to call under our mnemonic to this, forgetfulness, this could be a sign that a cardiac arrhythmia, like atrial fibrillation, could be responsible for what's going on. Answering your question more directly when it comes to barriers, one of the best ways to protect our patients from this is, from this risk of clotting, is through the use of anticoagulation therapy or blood thinners.

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Dr. Leal: And fortunately, we have a plethora of scientific evidence and good data to suggest and support which patient populations benefit from it the most, and also predictors of potential risk from that therapy so that an educated decision can be made between patients, families and clinicians alike. The problem is oftentimes there is a perception from either of these stakeholders - the patients, the family members or the physicians treating the patients - that one might be exposed to a higher risk of either falls or trauma or bleeding.

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Dr. Leal: And that may lead to a significant underutilization of this systemic anticoagulation therapy that we're talking about. There are other issues related to, for example, access to the medication or costs. And certain medications have unique ways to be administered and monitored as well. But one of the biggest barriers is this perception that the therapy could lead to some degree of harm and the overemphasis of this harm sometimes makes us forget that it is lifesaving therapy when it comes to preventing disabling, devastating strokes.

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Dr. Allred: I think you've done a really nice job in highlighting how that forgetfulness can travel along with atrial fibrillation. As you said, the comorbidities of hypertension and diabetes will often associate with forgetfulness, aging itself associated with forgetfulness. And then the disease state of AFib itself with microemboli and other things, predisposing our patients to forgetfulness. I think that's really important for us to understand and to focus on when we are seeing our patients, to recognize that they are at risk and to think about it more.

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Dr. Allred: So, as you think about patients with forgetfulness and you think about risk and benefits of anticoagulation in these patients, what do you see the greatest risk being? What do you see the greatest benefits being, and how do you tell that story when you're with patients and their family?

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Dr. Leal: Yeah, it is certainly a complex conversation, and I'm glad that you brought it up in the context today because ideally, you want to have this discussion in the outpatient clinic when you have the opportunity to meet with the patients, to meet with the family, to establish a rapport as a treating clinician, because one scenario that we often encounter, and nobody likes, is the necessity to make quick decisions at the bedside when a patient has been hospitalized in an urgent or emergent fashion. Because everything gets clouded, and it's hard to make appropriate decisions for the long-term based on snapshot assessments and evaluations.

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Dr. Leal: So, in the ideal scenario, a patient with atrial fibrillation, that was either recently diagnosed or who has known that he or she has this condition as part of their medical history, will approach his or her clinician and have a dedicated discussion on risks and benefits of anticoagulation therapy. Since the early 2000s, and more recently, 2009, a risk score called CHADS-VASc Score was designed and refined as the years went on to try and highlight the main features that are associated with risk of clotting, the risk of clot formation or thrombus formation, and then subsequently, the chances that this thrombus could embolize or simply travel towards other parts of the body.

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Dr. Leal: And today we're focusing on the central nervous systems, hence the title Forgetfulness. But it is true for every other organ. The clot can travel to the renal arteries and cause infarcts affecting the kidneys. It can travel towards the lower limbs and render a patient with a black toe, with a hypoperfused extremity. But focusing on the brain, we all know how much our patients appropriately fear strokes. In fact, anecdotally, many patients will say that they would rather die than suffer a disabling stroke that commits them to an institution where they no longer have independent living.

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Dr. Leal: So, the ideal scenario is to prevent these issues before they were to happen. And one of the manners to do that is by assessing the risk. So, the CHADS-VASc Score that I just referred to identifies certain features such as congestive heart failure, hypertension, older age, and there are two different levels: between the ages of 65 and 74, and then a higher level of risk beyond the age of 75. There is also that are other features such as diabetes mellitus, that we already discussed or alluded to, peripheral vascular disease that includes coronary artery disease as well or carotid artery disease.

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Dr. Leal: In all of these scenarios combined, in addition to the risk of a history of established previous stroke, add up to a number. And the importance of this numbers, it gives the patient and the clinician an idea, the quantifiable risk of having a stroke or a thromboembolic event within the next year or two or three. And it is fascinating to appreciate that all it takes is one or two of those risk factors that I mentioned to have someone be at a significantly high risk of stroke to the extent that anticoagulation therapy is recommended.

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Dr. Leal: So, when you think about it, there are very few patients out there who have atrial fibrillation and none of those conditions that I mentioned or perhaps, at most, one of them who might be okay being monitored very carefully, from a clinical standpoint, without anticoagulation. The vast majority of our patients belongs to two or three or four or more of those risk factors and consequently, should receive anticoagulation therapy unless there is obviously an absolute contraindication, such as, for instance, of recent large scale intracranial bleeding event, which fortunately does not happen to most of our patients.

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Dr. Leal: So, assessing risk is very important. Ideally, again, in a controlled clinical setting, such as an outpatient visit, where all of this can be explained to the patient and the family members with the help of visual aids and graphs and tables and whatever it is that we can do to highlight that this risk, although theoretical, may lead to a very practical and very inconvenient reality to the patient and their family if the anticoagulation therapy is not appropriately initiated. Conversely, another risk that is worth discussing is the risk of bleeding.

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Dr. Leal: We know that anticoagulation therapy is not without risk. In fact, it's estimated that one may have a chance of 0.8 to 1% per year of a bleeding event. Granted, not all of those bleeding events will lead to a significant hospitalization, but some of them might. And that's why other risk scores have been developed, such as HEMORR₂HAGES or HAS-BLED, with the intent of guiding, again, physicians, patients and families as to what the risk of bleeding may be if a patient is started on anticoagulation therapy, not with the intent of stopping that therapy, not with the intent of withholding initiation of

therapy, but rather to create that educated, or shared, decision making process so that both the physician and the patient, obviously their families as well, know exactly where they're getting into here. What kind of stroke risk they're trying to avoid, and what kind of bleeding risk that may add to that. The good news is that with the modern anticoagulation therapies available, and they have been launched in addition to warfarin, which is all we had for over five decades, now we have these direct oral anticoagulant agents, or DOACs, and they came with very interesting safety and efficacy profile, which has rendered them now more commonly prescribed for stroke prevention in atrial fibrillation than warfarin which, again, preceded them by over five decades. But the fact that they have a more convenient user profile with less interactions with other medications, and nearly no interactions with food, for instance, these have opened the door for a more compliant patient population to anticoagulation therapy.

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Dr. Allred: You know, I'm glad that you mentioned the shared decision-making process because I think so much of what we should do is to empower our patients to make an educated, informed decision, right? Because the end of the day, there are risks to anticoagulation and there are huge benefits of anticoagulation. And for any individual patient, they often have lots of thoughts and they should have input and impact into how we approach their care.

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Dr. Allred: So, I love that. As we think about University of Wisconsin, we know that your team is amazing. They've worked diligently to help take care of patients and to figure these things out in lots of ways. And I talk to lots of different hospitals, and so I would love to hear maybe just some of your best practices. If a patient's in the hospital, as you mentioned earlier, and you're talking about anticoagulation with that patient, or it could be someone in your office. But are there some best practices that you would share from University of Wisconsin regarding using these risk assessment tools, the education materials that you mentioned, anything else that you could share with the team today about how they're managing atrial fibrillation and forgetful patients?

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Dr. Leal: Certainly, Dr. Allred. I think it's important to standardize care, understanding that we always individualize that very same care to each of our patients. But when you create certain practices, standards or protocols, you tend to minimize variability in error. You also tend to provide higher quality care. So, at the University of Wisconsin, we have been trying to look at atrial fibrillation, not as an isolated disease condition, but rather part of a complex—the gamut of other cardiovascular situations or scenarios that might predispose the patient to significant events.

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Dr. Leal: So, for instance, if a patient is inside with atrial fibrillation, be it in the emergency room or the inpatient setting or the outpatient clinic, it is important that we try to comprehensively obtain a history and physical examination that may be able to give us some clues as to why that arrhythmia is present. For instance, we look for a history of recent cardiac surgery because we know that's an inciting factor that can contribute to the onset of atrial fibrillation, reactions to the inflammation around the recently repaired cardiac tissue. We look for endocrinopathies. As you know, thyroid storms and other conditions can cause a higher incidence of atrial fibrillation. We look for habits such as high alcohol intake, for example. We're familiar with the concept of holiday heart syndrome, which may affect any heart, young or old, as it is exposed to a higher than usual concentration of alcohol typically during episodes of binge drinking. We try to verify if the patient also has underlying conditions that may not be clinically apparent. So, sleep

apnea, for instance, is one of them. We look for untreated hypertension, one of the most common conditions and sometimes relatively simple to assess, if one takes the time to measure that blood pressure once or twice, sometimes through frequent assessments throughout the day or the week, sometimes utilizing ambulatory blood pressure monitors if necessary. So, the moment one undertakes this approach, this comprehensive, holistic approach, to treat atrial fibrillation and the patient who presents with atrial fibrillation, you're more likely to be successful because you're not only tackling the arrhythmia, per se. And for that we have our electrophysiology book to help us with the rate controllers to prevent tachycardia-induced cardiomyopathies. In other words, to make sure the heart is not working too hard and too fast for no need because it only compromises its function in the long term. We also have antiarrhythmic therapies that are more potent medications directly addressing the arrhythmia, per se, and they have invasive therapies like ablation procedures during which we select appropriate patients who sometimes may have failed medical therapy already. And we place catheters inside their hearts and try to tackle those areas that are known to be arrhythmogenic, that are known to be causing or perpetuating the arrhythmia or both.

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Dr. Leal: So, we do have those electrophysiological tools in our toolbox to help patients, but it would be a mistake to only focus on that. We have to look at a patient as a whole, and that includes, again, blood pressure management, blood sugar management, if they have diabetes or pre-diabetes, assessment of their lifestyle, encouraging patients to maintain a healthy exercise routine, which is something that is one of the biggest legacies the American Heart Association has given to all of us, is the plethora of evidence there is on the importance of maintaining an active lifestyle in addition to a healthy, low-salt, low-fat cardiac diet as well.

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Dr. Leal: So, our approach has been to look at a patient, again, holistically addressing every one of these conditions that might be either present, or sometimes subclinical, that might be contributing to the origin and perpetuation of atrial fibrillation. And certainly, we don't want to have ever a patient leave our clinic or our hospital or our emergency room without the discussion regarding anticoagulation therapies because regardless if the atrial fibrillation is paroxysmal, also known as intermittent, or persistent or longstanding persistent, which was formerly known as permanent or chronic, the risk of stroke is there. And that patient deserves a dedicated heart to heart conversation regarding the risks and the benefits of anticoagulation therapy. And with an honest conversation with the sharing of clinical data and good medical evidence, it is quite likely that the majority of patients will leave that medical encounter on the appropriate therapy, including systemic anticoagulation for prevention of strokes.

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Dr. Allred: Dr. Leal, thank you so much for sharing your best practices and insights on forgetfulness with us today.

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Dr. Leal: Dr. Allred, this was my pleasure. I really appreciate the opportunity to be here, and I hope this was a fruitful discussion for all of us.

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Dr. Allred: Absolutely. Thank you for joining us. And please come again to listen to the other episodes in our series, *The Four F's of AFib*. This series was produced through support from BMS-Pfizer Alliance.

Learn more about the American Heart Association and its atrial fibrillation quality improvement efforts by visiting heart.org/quality.