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Investigating Imaging in Monitoring GCA

Announcer (Introduction):

You're listening to ReachMD. This episode of *Living Rheum*, titled "Imaging Considerations in Monitoring GCA" is sponsored by Novartis US Clinical Development and Medical Affairs. The host and speaker have been compensated for their time. This program is intended for health care professionals. Here's your host, Dr Anisha Dua.

Dr Dua:

Patients diagnosed with giant cell arteritis, or GCA, are at risk of developing complications from the disease itself, as well as from the medications used to control the inflammation. GCA can also cause vision loss and increase the risk of strokes and heart attacks.²⁹

This is ReachMD, and I'm Dr Anisha Dua. Joining me to discuss imaging considerations in monitoring GCA is Dr Mike Putman. Dr Putman is an Assistant Professor of Medicine at the Medical College of Wisconsin. Dr Putman, thanks so much for being here to speak with me today. I look forward to talking with you about this interesting topic.

Dr Putman:

Oh, thank you for having me. The treatment questions are always my favorite ones, so, I'm especially looking forward to this episode.

Dr Dua:

So, let's begin at taking a look at some of the risks and long-term complications of GCA. What can you tell us about them, and how do you talk to your patients about them?

Dr Putman:

Yeah, it's a great question. And, you know, I mean there's quite a lot, actually. There's risks that are associated with GCA itself, and those are stroke, MI, peripheral arterial disease, aortic aneurisms, or dissections – sort of the vascular risks that people can develop.³⁰ And I think we're all cognizant of those and try to do our best to control for risk factors, encourage healthy lifestyles, and keep the disease itself under control, because vascular inflammation begets vascular remodeling, so, doing a good job of controlling GCA is important. But, the other risk is just the risks associated with treatments, and I think we'll talk about that a little bit more, but for a lot of people, the real trouble is that we're giving them treatments that wind up causing quite a lot of comorbidities themselves.^{13,17}

Dr Dua:

Yeah. Absolutely. So, right now, what are we – or you – currently doing to monitor your patients with GCA? What are you doing once you make the diagnosis? How are you following them?

Dr Putman:

I think this is one of the fun things about rheumatology, which is just that it's all about continuity and actually seeing your patients, getting to know them, understanding what symptoms are a flare and what symptoms are just kinda part of baseline, or vascular damage. So, a regular clinical exam, where you see the patient, hear their story, listen for bruits, take blood pressure in all their extremities – I think these are very important aspects of any exam.^{2,15}

Serology is important.² I do track the sedimentation rate, and the C-reactive protein, but I just can't emphasize enough, you know, when I meet someone with giant cell arteritis, I always tell them that we're gonna be lifelong friends, and I don't think they're quite prepared for

how much I'm going to make them come back. But, the key to vasculitis is often just monitoring your patients regularly,¹⁵ and so I think that's the most important thing.

Dr Dua:

Absolutely. You touched on the clinical exam, serologies, sort of getting to know your patient and what their disease is like, and what signals a flare to you.

In terms of imaging, what type of imaging do you use to monitor your patients with GCA in your practice? I know the ACR VF guidelines tell us to get some imaging in our GCA patients of the large vessels at baseline.²⁰ And earlier in previous episodes, we talked about the importance of recognizing large vessel inflammation,⁴ but what are you doing, sort of to monitor your patients, throughout their disease?

Dr Putman:

Yeah, that's a great question. I mean, I think that something that I just have to emphasize here is trying to use the same modality. Because it's so frustrating when you get a CT, and then you get an MRI, and then a CT PET, and they all measure things a little bit differently, and I've gotten very far down rabbit holes because of that. So, trying to stick with the same thing is helpful, and trying to rely on the strength of your radiology department. So, whether they're great at CT angiogram, or MR angiogram, I recommend going that direction.

I do like to try to monitor people somewhat regularly, and if they've had any involvement before. So someone who has axillary involvement, I will keep an eye on it to see if it's progressing. But you have to be careful about progression within the involved artery from the beginning, because a lot of the time, you just get progressive intimal hyperplasia, which I think of more as athero, where you just get narrowing over time, and you don't wanna overreact to that.^{17,31} But, I think that any modality can be helpful. CT angiography is useful.²⁰ Obviously, there's the contrast risk. MRI angiography is helpful, but it's a little long study – a little less accessible.^{17,32} And PET's quite a neat modality, but it's very hard to get, and certainly most people can't do regular PET scans, and somewhat – sort of a bit of a high – high radiation load.^{13,17,33}

Dr Dua:

Yep. Absolutely. So, we talked a little bit about monitoring disease activity, right? And the importance of doing that, of course. But let's take a look a little bit at how it can impact biologic treatments.

So, how are you following up with your patients when it comes to imaging? And then, most importantly, how does that data influence your therapeutic decisions?

Dr Putman:

Yeah, a couple thoughts on that. The first one is that we should all probably be doing more large vessel imaging.⁴ I think there's a lot of subclinical disease that may respond to treatment, if we were to find it. So, if you have large vessel involvement, you should be repeating testing periodically.

In all patients, I think that a couple of years in, you should be screening again for aortic aneurisms and aortic involvement.¹⁷ I don't have a specific timeline for that. I like to make sure up front that people don't have that, and somewhere around 5 years in, I think they deserve another check, to make sure that nothing has popped up.

And then, the real question is, what do you do in an asymptomatic patient, who has new vessel involvement. And it's hard for me not to react to new areas of inflammation. I think this is kind of where you often have a lot of opportunities for finesse. Maybe go up a little bit on the therapy that you already have. You add something low dose or smaller. But as soon as you're in that scenario, you need to be screening regularly. So, new involvement – you change treatment, and then your outcome measure for asymptomatic involvement is more imaging. And so, I think the people are a little hesitant to use imaging as a regular modality to track disease, but if we have new axillary involvement that the patient wasn't appreciating, and the inflammatory markers were low, or not very high, the only way to make sure that you're actually treating that is to re-image at a regular interval. So, I will start doing much more frequent imaging as soon as we have that.

Dr Dua:

Yeah. Absolutely, and another thing that will trigger me to get large vessel imaging outside of my regular, sort of monitoring period, is if somebody with classical cranial GCA has elevated inflammatory markers, doesn't have their typical headache, jaw claudication, all those other symptoms, so they're just not feeling well, or their inflammatory markers just keep rising – because again, the guidelines say

don't change your therapy just based on the SED rate and CRP.^{4,20} But, what do you do with that, and for me, that triggers me to sort of look again at the large blood vessels to see if I'm missing something.

Dr Putman:

Yeah, I always say, to my trainees, you know, a rising ESR and CRP in the absence of symptoms shouldn't change your therapy, but it should change your approach. And so, you should be seeing that patient more regularly, and you should be maybe digging for some other area of involvement, and just like you said, that's a kind of person where I would look for a large vessel involvement.

Dr Dua:

So, uh, finally, Dr. Putman, do you have any final takeaways you'd like to share with our audience?

Dr Putman:

Yeah, absolutely. I mean, I think that my first takeaway is just to be holistic, in the sense that there's no clear biomarker, there's no clear thing that's going to make sure that someone's going to relapse. And so, you need to be doing a little bit of everything. You need to be seeing your patients regularly. You need to be evaluating them for laboratory evidence of flares, and you need to be tracking them with imaging, and tracking people who have had large vessel involvement much, much more closely than you would the other folks.

And my other big take-home, I mentioned this right up front, is that we should be doing more. I think that complacency in GCA is quite common, and I should say, my caveat is that I'm always hesitant to screen aggressively and find things that we wouldn't necessarily have been treating before. So you need to not overreact, but I do think that screening and making sure you're not missing something is important, and then reacting appropriately, whatever that may be, is key.

Dr Dua:

It's a fine line, but yes, I totally agree. That's a great way to round out our discussion on this topic. And I wanna thank my guest, for helping us better understand the role of imaging in monitoring GCA. Dr Putman, it was great speaking with you today.

Dr Putman:

Oh, this was lovely. Thanks so much for having me. I'll be looking forward to coming back, hopefully one more time in the future.

Dr Dua:

I look forward to it too.

Announcer (Close):

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