Transcript Details
This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/living-rheum/diagnosing-giant-cell-arthritis/13341/

ReachMD
www.reachmd.com
info@reachmd.com
(866) 423-7849

Diagnosing Giant Cell Arteritis

Announcer (Introduction):

You're listening to ReachMD. This episode of *Living Rheum*, titled "Diagnosing Giant Cell Arteritis" 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:

Giant cell arteritis, or GCA for short, is the most common type of large vessel vasculitis, and it can lead to several complications. Patients presenting with classic cranial symptoms are usually diagnosed within eight weeks of their symptom onset.

But for patients with non-cranial GCA, it can take a lot longer to reach a diagnosis, which is why when recognizing the clinical features and signs of GCA is critical in order to make an accurate and timely diagnosis, and to prevent the long-term consequences of this disease.

This is ReachMD, and I'm Dr Anisha Dua. Joining me to discuss diagnosing GCA is Dr Mike Putman. Dr Putman is an Assistant Professor of Medicine at the Medical College of Wisconsin, and in fact, he was one of my trainees during his residency and fellowship. We go way back, and he's a good friend. Dr Putman, thanks so much for being here today. I'm excited to talk with you.

Dr Putman:

Ah, thanks for having me. I'm excited to be a part of it.

Dr Dua:

All right. So, let's get into this. First, let's talk about some of the clinical clues, and some of the presenting manifestations of GCA. So just tell us a little bit about what are some of the signs of GCA that we should be looking for when a patient comes in, or when we're assessing a patient.

Dr Putman:

That's a great question, and, you know, just for overall framing, the hard part about GCA is that there's no one feature that's enough to diagnose it. There isn't this pathognomonic thing that will make you know that you're looking at GCA. And so, you know, I always start with just sort of the classic cranial features, and I think these are the ones that most people are familiar with. Headaches are quite common, and actually they have the highest negative likelihood ratio.[2] So, the absence of headaches is a good vote against GCA, but of course, it's not 100%.

And then scalp tenderness[2] – so just patients will say that their scalp is tender to touch, or it's hard to lay down on a pillow. Then, of course, jaw claudication, I think, is one of the features that trainees all learn, and for good reason. Jaw claudication is the sensation of tiredness, or tightness, or even pain in your jaw with chewing. It's not pain all the time, it's kind of corollary to angina, where you get exertional symptoms. So, jaw claudication is quite a strong symptom, and it's actually the one that is the highest positive likelihood ratio, so it most increases the likelihood of giant cell arteritis.[2] But then, it also is the most closely associated with vision loss, which is one of the outcomes that we really care about.[2,3] So, I think jaw claudication is a particularly important symptom.

And then, of course, vision loss, which I just mentioned, is the thing to look out for. The patient presents with new onset sudden loss of vision.[2,4] I always get nervous, for good reason, but you should always consider giant cell arteritis when that happens.

Dr Dua:

Are there any other things that that would go along more, with some of the noncranial symptoms that you sort of look out for or ask patients about?

Dr Putman:

Yeah, absolutely. And some of those are actually really good symptoms that also point you quite a bit towards the diagnosis, so the noncranial symptoms, or constitutional symptoms, so people feel fatigued and rundown, and – those are of course, totally nonspecific, and can occur from almost any disease, but they certainly happen in giant cell arteritis.[5]

And then a symptom of polymyalgia rheumatica is quite useful.[2,4] About 50% of people with giant cell arteritis will have PMR-esque symptoms.[6] I think that looking for a polymyalgia rheumatica, which typically presents with shoulder stiffness, hip stiffness, elevated inflammatory markers, and fatigue,[6,7] that's actually quite a good symptom as well. I always screen for limb claudication, which when present is quite useful.[2] It points somewhat strongly towards the diagnosis of GCA, and so that would be, claudication in the lower extremities, or in the hands, which can happen from axillary involvement.[2,6] And, so I always screen for that. I don't find it very often, and like most of these features, it's absence doesn't prove the absence of GCA,[2] but when present, it can be quite helpful.

Dr Dua:

Of course. Those are all definitely things that are important to sort of check in with, ask our patients, and it's everywhere, right? The blood vessels are everywhere and so you can have symptoms in a lot of areas,[6] but it's important to point out some of these classic ones that we should be looking for.

But, are there any other diseases – thinking about those manifestations – that present similarly to GCA? How should we go about differentiating – you mentioned headache, right? So, there's a lot of different things that can cause a headache. How do we kind of tease out GCA from some of these other disease mimics?

Dr Putman:

Yeah, and this is where I always say that good rheumatologists are good internists, because you have to be ready to diagnose all sorts of other things, if you want to avoid erroneously chasing down a case of giant cell arteritis. And I do think that that starts with headaches. So, being able to recognize migraine headaches – if a patient has a classic aura, really bad headache, that can often point towards a migraine.[8–10]

For me, a big question, especially in people who've had chronic headaches, is, "Is this different than your normal headache?" And folks who have had headaches before, and suffer from chronic headaches, will be able to tell you, "You know, this is a very different headache. It's never been like this." And I take those concerns very seriously.

Now, I said that jaw claudication is quite useful, which also means that trigeminal neuralgia is quite unfortunate. There are a lot of people with TMJ syndrome and trigeminal neuralgia, that can sort of simulate jaw pain, and parsing that from jaw claudication is often one of my major tasks.[10,11] So, I'll ask about that jaw pain in 10 different ways and get 15 different answers.

Dr Dua:

Any of the other mimics you can think about that would go along with a large vessel presentation, or some of the large vessel involvement? Or what's on your differential?

Dr Putman:

So, I mean, people can just have isolated aortitis, when their aorta can become inflamed.[12] Atherosclerosis is a big problem. I mean, it's uncommon in the axillary arteries actually, but I've chased down a couple bruits that were just atherosclerosis. And it's very common in the lower extremities, so most lower extremity claudication is just peripheral arterial disease.[12] Rheumatologists are always excited to find a case of IgG4-related disease, and that's very much on the differential if you have imaging showing involvement especially the thoracic aorta.[12]

And then there's some kind of funky, infectious etiologies, such as TB, and syphilis,[12] you kind of keep in the back of your mind. I haven't really seen too many instances of that, and I have seen small vessel vasculitis that mimics large vessel vasculitis, so there's all these odd birds you need to chase down, but for me the big ones, I think, is athero, when it comes to large vessel stuff.

Dr Dua:

Absolutely. No, I completely agree, thanks. So, alright. Given some of these different, overlapping symptoms we talked about – and you told us a few ways we can try to tease out whether it's really vasculitis or maybe something else. But are there any specific lab tests, or biomarkers – anything that can help us diagnose GCA?

Dr Putman:

Yeah, absolutely, and I think that as we've transitioned more and more into fancy, modern medicine, we're always looking for some incredible lab to clinch the diagnosis for us. And GCA labs are very similar to the clinical symptoms. We look at the sedimentation rates, and the C-reactive protein, the ESR and CRP. Both of them are classically elevated in GCA, and higher elevations tend to be better, so an ESR of 50 isn't quite as convincing as an ESR of 80, but those are, of course, nonspecific findings. They increase the likelihood when present, but they don't clinch the diagnosis.[6,13] And there are a subset of people who will have totally normal ESRs and CRPs. They tend to have a worse prognosis, and they tend to be very hard to diagnose.[14] And so, I think that those are the labs we most commonly think about and most commonly use. Some other things, like thrombocytosis and anemia, can be helpful too.[13,15]

Dr Dua:

Right. Absolutely. So, I wish there was one antibody test –rheumatologists are always trying to find the one thing, like you mentioned. But we don't have that here, but at least we have a couple of clues. So, the ACR and the Vasculitis Foundation recommended a temporal artery biopsy, right? Or TAB to establish a diagnosis of giant cell arteritis. So what can you tell us about the procedure, and are there any limitations in terms of doing the procedure, obtaining the biopsy, interpreting the results?

Dr Putman:

Oh, yeah. Limitations at every step of the way, as always. If you're gonna do a TAB, which – a temporal artery biopsy – which I think is often indicated, you should try and do it soon. Over time, the yield goes down, so you want to try and get it up front, if possible. Typically within 2 weeks is recommended. You wanna get a big piece, so you want a long biopsy, it's better than a small one.[6] We've heard of skip lesions, so the larger the sample, the more likely to clinch the diagnosis. Really for all of this, I think you just need to work very closely with our friends who actually do the biopsies – whoever that is at your hospital – if that's vascular surgery, or neurosurgery or ophthalmology – you gotta get them a muffin tray on occasion, to make sure that they know who you are, and care about you. So, trying to time it right is really important, and when negative, it doesn't always mean the patient doesn't have giant cell arteritis,[16] which I think is a common misconception, so once you get it, you have to interpret it properly. And, there's a lot more that can go into that, too. Some findings are a little atypical, or a little strange, and it can be a little difficult to run those down.

Dr Dua:

Yeah, I completely agree there. Those nuances and it's hard, sometimes, to tease out, and it is really a team effort, right, with the pathologists, the surgeon, making sure you're doing the timing right, the interpretation, the clinical context, trying to explain that to the patient. There are so many pieces that kind of have to be put together, which is what we technically love doing, right? As rheumatologists. But it is, it can be difficult.

So, can you tell us why is it so important that we get it right? I know you alluded a little bit to the vision loss, but tell us why do we need to clinch it? Why is it so important for us not to miss this diagnosis?

Dr Putman:

Yeah, well, I mean, it hard to do medicine well, unless you get the diagnosis right from the beginning. And in this case, I mean, the perils of over- or underdiagnosing are actually quite high. So, if you overdiagnose and are just diagnosing GCA willy-nilly, you're gonna give people a lot of steroids for no reason. And, I mean, anyone who's done rheumatology for any amount of time knows that steroids can be really life-altering, and in many times, can just completely derail someone's life.[17] And doing that, for an erroneous diagnosis, is quite a misstep. But in the flipside, is that underdiagnosis means you will miss people who may develop permanent vision loss, and, you know, it depends on which cohort you're looking at, but 10-20% of people will have some degree of permanent vision loss with GCA.[17–19] And that can also be life-altering. So, we're kind of constantly trying to make sure we catch the people, and prevent vision loss, but then, also don't accidently give a bunch of healthy folks tons of steroids for no reason. And, it can be quite a challenge.

Dr Dua:

Yes, absolutely. I totally agree, and hopefully, we'll talk about some of the challenges, and how we approach them in the next episodes. But that's a great way to round out our discussion on this topic, and I wanna thank you, Dr Putman, for helping us better understand how

to diagnose GCA. It was great speaking with you today, and I look forward to talking more about the role of imaging modalities in diagnosing GCA.

Dr Putman:

Yeah, thanks much for having me. I'll be excited to do that one as well. So, we'll talk soon.

Announcer (Close):

This industry podcast was sponsored by Novartis US Clinical Development and Medical Affairs. If you missed any part of this discussion or to find others in this series, visit reachmd.com/living-rheum. This is ReachMD. Be part of the knowledge.

References:

1. Van Der Geest KSM, Sandovici M, Brouwer E, Mackie SL. Diagnostic accuracy of symptoms, physical signs, and laboratory tests for giant cell arteritis: a systematic review and meta-analysis. *JAMA Intern Med*. 2020;180(10):1295-1304. doi:10.1001/jamainternmed.2020.3050

2. Singh AG, Kermani TA, Crowson CS, Weyand CM, Matteson EL, Warrington KJ. Visual manifestations in giant cell arteritis: trend over 5 decades in a population-based cohort. *J Rheumatol*. 2015;42(2):309-315. doi:10.3899/jrheum.140188

3. Garvey TD, Koster MJ, Warrington KJ. My treatment approach to giant cell arteritis. *Mayo Clin Proc*. 2021;96(6):1530-1545. doi:10.1016/j.mayocp.2021.02.013

4. Lensen KDF, Voskuyl AE, Comans EFI, Van Der Laken CJ, Smulders YM. Extracranial giant cell arteritis: a narrative review.

5. Ciofalo A, Gulotta G, Iannella G, et al. Giant cell arteritis (GCA): pathogenesis, clinical aspects and treatment approaches. *Curr Rheumatol Rev*. 2019;15(4):259-268. doi:10.2174/1573397115666190227194014

6. Buttgereit F, Dejaco C, Matteson EL, Dasgupta B. Polymyalgia rheumatica and giant cell arteritis a systematic review. *JAMA*. 2016;315(22):2442-2458. doi:10.1001/jama.2016.5444

7. Qadir A, Khakwani AS, Khan MR, et al. Ocular syphilis mimicking giant cell arteritis. *Cureus*. 2022;14(5):4-5. doi:10.7759/cureus.24715

8. Inalkaç Gemici Y, Taşci İ. Temporal arteritis and trigeminal neuralgia overlap syndrome: a case report. *Agri*. 2019;31(4):206-208. doi:10.14744/agri.2019.33600

9. Cohen J. Trigeminal neuralgia. NORD. Published 2014. Accessed May 13, 2022. https://rarediseases.org/rare-diseases/trigeminal-neuralgia/

10. Berry S, Lin W V, Sadaka A, Lee AG. Nonarteritic anterior ischemic optic neuropathy: cause, effect, and management. *Eye Brain*. 2017;9:23-28. doi:10.2147/EB.S125311

11. Ramon A, Greigert H, Ornetti P, Bonnotte B, Samson M. Mimickers of large vessel giant cell arteritis. *J Clin Med*. 2022;11(3):1-14. doi:10.3390/jcm11030495

12. Baig IF, Pascoe AR, Kini A, Lee AG. Giant cell arteritis: early diagnosis is key. *Eye Brain*. 2019;11:1-12. doi:10.2147/EB.S170388

13. Kermani TA, Warrington KJ, Cuthbertson D, et al. Disease relapses among patients with giant cell arteritis: a prospective, longitudinal cohort study. *J Rheumatol*. 2015;42(7):1213-1217. doi:10.3899/jrheum.141347

14. Ness T, Bley TA, Schmidt WA, Lamprecht P. The diagnosis and treatment of giant cell arteritis. *Dtsch Arztebl Int*. 2013;110(21):376-384. doi:10.3238/arztebl.2013.0376

15. Luqmani R, Lee E, Singh S, et al. The role of ultrasound compared to biopsy of temporal arteries in the diagnosis and treatment of giant cell arteritis (TABUL): a diagnostic accuracy and cost-effectiveness study. *Heal Technol Assess*. 2016;20(90):1-238. doi:10.3310/hta20900

16. Ponte C, Rodrigues AF, O'Neill L, Luqmani RA. Giant cell arteritis: current treatment and management. *World J Clin Cases*. 2015;3(6):484-494. doi:10.12998/wjcc.v3.i6.484

17. Le Goueff A, Peters J, Willcocks L, Jayne D. Visual loss in giant cell arteritis 3 weeks after steroid initiation. *BMJ Case Rep*. 2019;12(3):12-15. doi:10.1136/bcr-2018-228251

18. Perrineau S, Ghesquière T, Charles P, et al. A French cohort of patients with giant cell arteritis: glucocorticoid treatment and its

associated side effects. *Clin Exp Rheumatol*. 2021;39(2):S155-S160. doi:10.55563/clinexprheumatol/0nd4kk

194979 7/22