Introduction and Dr. Vaughnu2019s Background

– Welcome to the long haul and chronic fatigue summit. I am so excited to have with me today Dr. Jordan Voughn. I watched him speak at the F. L. C. C. C. Conference a month ago and I wanted to bring him to you all because he's looking at long covid through a lens.

The very view doctors in America are yet some doctors in Europe are. But what he's gonna bring today to us is key. It's key to understanding and treating this illness. So for doctors and patients watching this one today, be prepared for a very informed discussion.

Dr. Vaughn welcome. – I'm so happy to have you here today. Thanks for having me. I'm a pleasure to be here. – Thank you. Let's have let's start by having you introduce yourself to the audience. – So I am a son of a physician, a son of a general practitioner and I myself am I have a background in chemical engineering and decided to go to med school just like my father.

My father was a mechanical engineer prior to med school and we trained here in Birmingham as an internist. I learned that what I really liked about medicine was knowing a little bit about everything.

I kind of get bored when it comes to doing the same procedure over and over which is a lot of what specialization in medicine has become and instead I liked hearing the multi facets of of people's experience with disease and in general also realizing that one of my favorite things to do was take care of people. My father uh you know grew up kind of as a general practitioner that had taken care of generations of his patients and in many ways that's what I inherited. And so it's been been a fun go at it.

I currently practice here in Birmingham. I was probably one of the only physicians here in town that really thought that the you know, prescription for treating covid and actually utilizing almost no uh really early treatment was kind of crazy because I've never actually seen a disease that didn't really matter that you didn't treat it early.

Also was somebody that started reading the rest of the world's literature. The one thing that we have right now is the ability to read what everybody else is doing in the world. And it made no sense that I was waiting for some octogenarian in D. C. To tell me what to do, even though he hadn't seen a patient in 50 years.

So that's really what, you know, kind of how I cut my teeth in covid and that's that's where I am today. I've still a general practitioner, an internist, basically taking care of lots of complex disease processes.

I've always been open to things that may have not been, you know, taught at my medical school or and my father has a background in preventive medicine and somewhat alternative medicine. And so I kind of was brought to that uh you know a little bit off script from what the academic medical institutes would want me to do.

– So fantastic. I love that. I love that you inherited this way of thinking. It just, I mean it was you just by osmosis, right? Your dad brought that to you and now you're bringing it to the people where you live in your clinic and really all over the country now.

And I fully agree with you about this being an illness where how do we not treat it to begin with? We treat everything else? Why would just sit there and wait. – Exactly. That, that was one of the first kind of sniff tests that you said something's going on here, that you know, isn't isn't what we would have done any, you know, the other thing was that they scared doctors initially. I mean, the fact that they would tell patients who are sick not to go to their doctor. I mean that to me just kind of strain credulity.

That that was the answer so. – Right. Right. So let's dive right in what would you say explains the medical system here in America the inability to start solving this issue.

Why the Medical System Misses Long COVID

– So, the reality is a lot of what we would call specialization in medicine isn't necessarily a product of the ability to think broader about medical disease processes, but instead to silo them into specific areas and then allow people to get uh really a very deep understanding and the most important thing is usually what actually at least in makes them money is the ability to do a procedure on that certain disease area. And so that would be cardiologists like to do hard cast. You know, pulmonologist like to do bronchoscopy is gastro neurologist, like to do colonoscopies. Really.

We live in a society that medical system is really based on the specialization of the ability to do a procedure. Most of these physicians themselves, their knowledge of the disease process is not necessarily any better.

In fact, it may not be better at all than the classic internist. And so I think that's that's one of the kind of big differences and because of that siloed system when something comes along, especially like covid, because there was a great article recently talking about just the kind of covid and it's fibrin elliptic aspects meaning kind of the clotting aspects and it describe Stars CO two as a multi systems disease and that was that was just that's the first sentence.

SARSCov2 is a multi system disease. It didn't say it was a respiratory disease. Thank God because it's not, it affects the respiratory system. But in it in general what SARS COV 2 is a multi system disease and our system hates multi systems disease. And that definitely specialists hate that too because that means they have have to actually sit down and think outside the box and their boxes are a lot, you know directed by what they currently do in procedure world.

And the worst thing a doctor can have is some kind of test or something that they get done that they really don't know what to do with and that's really what codes really force them to do. That's why they don't really like it, meaning you get a scan or you get some kind of thing that you're used to seeing coronary disease, but all of a sudden you're seeing something different.

You really don't even have the lens to look at it through, especially if you don't understand the new disease process. I think this is so true. – In fact, I'll even call it one of the dirty secrets of medicine right now, right that the in fact our medical system is built on the acute care model, which I think was built on war if you have to begin with bullet wounds or broken sort of broken bones and everybody's body for the most part behaves the same a goes to be.

And um the body has not shifted yet into that place where it's become chronic and now we're talking about genes meet the environment, meets inflammation and now we've got expression that of illness is different and each person a does not go to be anymore in this box of healing and it's not, we're not having the same answers for each person.

But now we've got this this method of understanding medicine is the acute care model, then they try to superimpose it onto the content care model and it just can't support it.

– Yeah, agreed. And then the other thing is when you look at um the understanding of the disease process, the fact that at least in the United States, it was decided about three months into this, that this was a uh nothing more than a bad viral pneumonia. Well, if it was a bad viral pneumonia, why did everything we do actually not benefit people like a typical viral pneumonia instead, As we'll talk about in a second, what we found was this is not your mom's, you know, your your grandma's viral pneumonia. This is a viral pneumonia.

That is unlike anything we've seen and it's really unlike anything we've seen and how it affects the vascular system and the coagulation system. Obviously it revs up the inflammatory system, like most diseases do, but not all of the diseases historically have done what this does to the clotting process and what we would call thrombosis inflammation or micro thrombosis.

– Right? So this is why I'm so excited to have you here. This is what nobody else is talking about. Or maybe some

people really not not so much in America. So Dr. Voughn bring it, tell them about the vast inflammation. Yes. So the first, the first thing that you probably, most people knew this is that they started to hear that the reports and most of the deaths, a lot of, a lot of them involved, some type of clotting process, Most of the doctors reports was that, you know, everything that they usually used in the hospital, whether it was, you know, continual renal replacement therapy or ECMO circuits, everything was clotting so much different than it had ever seen.

In addition to that everything that we were doing historically for a classic inflammatory viral pneumonia wasn't really working. In fact, people that when they got on the ventilators actually didn't get better for the most part, if you got on the ventilator, you go worse.

The other thing that was interesting is when we talk about people who survived hospitalization, especially in the older population, it was people that were on medicines that typically are associated with worse historic historical disease processes and those medicines are like warfarin eloquence. I mean obviously if you had two people going to the hospital and one of the patients was on a blood thinner, you would think that that patient was sicker than the one.

That wasn't correct.

COVID as a Vascular and Clotting Disease

But the fact that he was on a blood thinner mean he was twice as likely to leave the hospital versus the one who wasn't, which all of a sudden you start to say there must be something going on here because typically somebody on a blood thinner in general is at more risk in the hospital than somebody who's not because again, you know, we can kind of evaluate what we would talk about if you're on a blood thinner and you're in your seventies, you have some type of other issue like atrial fibrillation or some hard underlying heart issue, like heart failure, but it's, you know, it's never been seen that those people are the ones that to survive acute illnesses, but that that's what happened.

And so that was, that was kind of our suggestion. There's some smart people in South Africa that started to realize that this isn't a viral pneumonia, but instead it is a vascular disease. Now, even to this day, there's some radiologists actually in England, one of them, Graeme Lloyd jones who actually goes ahead and he will talk about the fact that most of the chest X ray changes as well as CT scan changes on the, on the radiological findings are even though they appear to look like something that people have seen in the past, what they actually are, when you look at pathology is they're all vascular.

So it's, he almost calls it a primary pulmonary vascular empathy, which is just a fancy word of saying really, the viral pneumonia is an is a change on your chest X ray, but all of it is in the vessels. And so that's where all of a sudden you started to realize, hey, in the acute process of covid, anti coagulation, anti platelet are important. And I think that's where we started to see good results, especially in other countries America, we really didn't utilize this much.

And when we did try anti coagulation, it was usually really far into the process of hospitalizations today, 20 or something like that. And at that point it's, it's a little different um kind of scheme and so it really didn't work out well. It was the early, you know, applying it early that matter. – Right. Thank you.

Can you, can you speak a little bit about how this happens. – So what we know from the spike protein and actually, um, somebody that I'm really thankful for their, their current research is research Pretorius.

But what she was able to prove after Jocko. Jocko is a cardiac intensivist in South Africa that actually in June of 2020 released a video that said, look, we're barking up the wrong tree. This is not a pulmonary disease, an airway disease, this is a vascular disease. He and Reza again, smart people that cared about patients and wanted to take care of a complex disease process in the midst of what we would call it a pandemic.

Instead decided, hey, well maybe we should look at the patient themselves instead of listening to somebody in some bureaucratic paper pushing position and some administrative medical ward.

But they decided, hey, I'm seeing some crazy clots. Hey, I actually have somebody down the road named Reza who, who, that's what she does for a living. She's one of the experts actually in understanding structural changes in fibrin and chronic disease states.

And what he was able to do is send her blood and from that point, it was just amazing to see that this was just lighting up like crazy for things that she had usually seen in people that have had chronic disease states and what they did was start to understand that what the unique thing that was causing the structural changes in fibrin and the anomalous uh coming together of fibrin was the S one subunit of the spike protein, which is really what makes covid unique. And so the reality is everything else about covid is not that abnormal or not that different than a typical viral pathogen.

It is this spike protein that causes disruption and inflammatory process, but we also know the S one subunit causes fibrin to be deposited without thrombin.

So the absence of thrombin, usually your body needs thrombin to actually start the coagulation process. But this this spike protein itself causes this anomalous folding. That anomalous folding is also once it's folded resistant to fiber analysis. So don't get me wrong, most inflammatory states. Most inflammatory um disease processes cause some part of fibrin or fibrin deposition, but it's weird to not only not have thrombin involved, but also to make those fibrin change different enough that your body can't break them down and that's actually how the process led us to understand what's going on in long covid.

– So we're seeing more clots, tell us tell us about where these clots are being seen. So interesting. – Yeah, interestingly enough, they're not necessary when we talk almost you know stay away from using the word clots because when you use clots around family members or um you know your physicians, they start to think of the worst and the reality is is what these, I would call them Sludge. Sludge is probably a better term for it because and they are all for the most part are in in arterial, you know for the most part when we talk about clots that are dangerous in um in our you know kind of classic acute medical world, we're talking about venous clots in big venous chambers like your deep veins in your legs and those get dislodged and then cause you know, crazy abnormalities whether it's in the heart or to the lungs. Instead we are talking about clotting that is from what we call micro thrombosis and city, which is a fancy word for saying the clots don't form somewhere else and come instead they form right there in the vessels themselves and so they form at the end arterials and then they basically sludge up where there's either oxygen that needs to be transferred into the uh hemoglobin or oxygen needs to eat, leave the hemoglobin and get to the tissues. And so um you know when we're looking at all these pathology, pretty much every end arterial, which we would call the micro capillaries like the or in England, they call it the micro capillaries.

But in in general, that is where these are, and that's what's so unique about them is because we don't really have a good way of evaluating uh those in medicine.

And I always use the kind of um you know, little metaphor I say, you know, imagine that you're sitting in your shower at home and there's nothing coming out of your shower head and you called a plumber to fix it.

And imagine that plumber decided, okay, he comes over and he stays in your yard instead and looks at the main water pipe, the eight inch water pipe to your house.

And he says, what's open? I don't know what you're complaining about. And I mean you'd fire that plumber because you'd be like, why don't you come into the house and look at my half inch pipe that isn't having anything come out of it. But that's that's kind of the conundrum, we're in a medicine. It's, it's a lot of cardiologists, a lot of pulmonologist saying, look, everything looks good and you're like, well I feel terrible. And the only thing that's changed is this covid event, and the reality is it's because the plumber really probably doesn't even have the tools to come inside, but much less doesn't even, it doesn't even care enough to come inside. And it's there's not many plumbers that do right now, does that make sense. So they're much better at saying, well everything's normal. Well, you know the problem is a lot of them are actually telling patients there's nothing wrong with you.

I will say that if you want to find a good physician I find one that doesn't usually use those words because first of all, there's something wrong with all of us.

Okay. Most people a good physician will say, I don't know what's wrong with you. But the ones that say there's nothing wrong with you, I usually have a problem with that. That takes quite hubris to to know everything about a person. Especially for the 20 to 30 minutes.

You may have met them right? I fully agree with you. – Yeah, let's talk about diagnostics now.

Microclots, Diagnostics, and Imaging

So how do you, since there are plumbers outside looking in the wrong place, how do you make your diagnostics inside the house? – So there's a couple different, I mean there's obviously there's a lot of good research studies that look at things especially out of Italy.

Italy seems to be kind of ahead of this, mainly probably because they were the first kind of on the scenes and realized that everything they were doing was awful.

And so, you know, a lot of you know, if you remember back to the March-April of 2020 it was Italy we were kind of watching were little parts of Spain but Italy has um you know kind of been in this post covid world a little bit longer than us and what they have done is a lot of, you know, what we would call spec C. T. Scans and spect ct scans as well as what we would call nuclear or what we call V. Q. Scans. There.

The best way to pick up on this now. The reality is I mean I I live in a town that has a pretty uh great academic medical center and great meaning, you know historically and rated and right now I'm not really impressed with how they've treated this disease process. But um you know, trying to find somebody to do a spect ct scan or even a V.

Q. Scan in the outpatient world is very difficult. We've done I do it some. But you know, chest x rays are a good example to again, when we were talking about what Dr Graeme Lloyd jones was talking about is pretty much all the changes the ground glass opacity is that are on chest x rays is are not a typical pneumonia.

What they are is really a vascular phenomenon. And when we look at autopsies from those ground glass, what is in that ground glass of what makes up that ground glass is fibrin. And so that's another kind of diagnostic clue.

The other is just symptoms. I think symptoms are very important. I think other things like d dimmer are okay, especially if you're pretty acutely involved in the disease process. But the problem with the dimmer is it requires your body to be breaking down these fibrin chains.

And the problem is, as we said earlier, they're resistant to brittle ice. So if they're not and the problem is they're sledging up. So if they're smudged up and resistant ephemeralysis, you're not gonna have a diamond elevation unless it's an acute process.

And so, you know, it's, there's lots of different things. Now I will say Reese and Doug and a couple other people in Europe are figuring out some things that seem to be elevated. A couple of them are labs that aren't necessary, really easy to order. One of those like alpha two anti plasma, von will burns factor, platelet factor for those are things that are out there.

In some of the studies that looked at, they definitely have a significance or statistical significance when they look at plasma compared to or just the serum of people that have long covid versus don't. The one thing that we do know and this is what Reese is actually working on is what really led her to understand this was the ability to look under the microscope and see these fibrin structural changes in these micro clot complexes and they're present in people's plasma.

So, you know, platelet poor plasma that you can get spun down and you can look under the microscope under fluorescence and see it and I currently have a microscope that Reese is training me on, I'm not saying that I am in any way uh you know this is way outside my purview especially again I'm a general internist that doesn't always feel like the one thing I've seen to specialize in now is Covid which is interesting.

I've just been interested in it but it's it really is the ability to do that. So she was at two weeks ago she was at N. Y. U. Lab as well as Harvard I think teaching them how to do it. So I'm hopeful that with her persistence and teaching that more people will be able to look at it.

But 100% of the people that they've evaluated have these abnormal microscopic complexes in their plasma and in all honesty the treatment that she prescribed or Jacques not she but Jacques had come up with which is really just a rehash of what he was doing in acute covid which is what we call triple therapy. We see resolution of those micro clots.

Again he's still a small subset. It's definitely biased because it was only people that had long covid but you can't deny that everyone had them and then they did.

And then the people that didn't get the therapy still had them in their persistence. So so diagnostically the answer is difficult. I think listening to the patient is probably one of the most important things to do. Uh I have become a little bit better at getting some objective measures. Um The subjective is pretty dang important when you talk about young people, I mean some of the first people that actually had this issue for me were some college athletes that they had no other reason other than getting covid that they all of a sudden had declines in their mild timers.

You know, it was so at that point you go well and then you see their chest x ray, you put it together, you start to look at Reza and what Reza and Jacques are doing in South Africa. And you say, I'm going to try this and talk to them about the risk. And then you start to see incredible results and you go, well, there's something to this. And then over time you start to kind of, you know, narrow in on where you where you start to find people that um benefit.

Now I will say the older and unfortunately for kind of your clinic, the uh people that already had complex diseases, it's harder to parse out because the interesting thing is, is some of, you know, the initial things that we would rely on would be, you know, what's uh you know, what was your performance or how did you feel like prior to covid or some type of other spike protein incident?

And that was a very easy way to parse it out when you start talking about 70 or 80 year olds, that have, you know, tons of complex comorbidities or somebody and some of the hardest patients I've taken care of have psoriatic arthritis with Lyme disease or you name it. I mean things that walk into my office now are definitely uh questioning my decision to be more into this this world but it's fascinating and so it's it's definitely it's difficult but and so all I would say is having somebody you trust and going through the uh the kind of evaluation but also understanding that for the most part a lot of these medicines they have risk but a lot of the risks are risk for 85 year olds falling out of their house down the steps.

They're not necessarily the same type of risk that you would have for somebody who's at least being careful. The other thing is you're not gonna be on your whole life. I mean these are things that we put on for people for 1 to 3 to four months and then it's done as long as they don't have a reoccurring event and how that translates into the kind of current uh development on the M. E. C. F. S side?

I don't know yet. How long does that treatment last? We're still figuring that out. – So, so what kind of treatments do you like to give for this. – So for the most part the key is is anti platelet. So they're they're in a perfect world.

We would have something that would break down these fibrin abnormal vibrant chains. The reality is we don't have many of those except for T. P. A. And T. P. A.

Itself is very dangerous. It's one of the things you don't even really want in the ER because it causes bleeding correct? So a lot of what the triple therapy we've looked at is understanding these micro uh platelet complexes as dynamic biological systems.

So just because you have a clot doesn't mean that the clot just stays there in a stagnant instead your body is actively both repairing it and breaking it down all the time.

And so what you're trying to do with the triple therapy that I use which is made up of aspirin Plavix and a direct oral anticoagulants is basically inhibit the body from repairing these micro clots and only allowing the body to digest them.

Now there's other therapies that we hope that are on you know on the docket that are coming but right now that that's really what we're trying to do. There are natural mechanisms and we know in the lab they work we don't really know the dosage of those things but those things are like lumbercanis serrapeptase, lumbercanis family. Um in this little system all these kind of things do have a what I would call fibrin elliptic properties.

They're usually prodi allergic enzymes they come from plants or uh you know insects really well I would just say nature and we know that they break down proteins and that's what we want. So a lot of times, what I do is especially older people is I will use things like aspirin NATO kinda Serrapeptase and cysteine and use it and just kind of assess how they do now. The reality is most of them do a lot better because again those things are good, good for the vasculature anyway.

And so when the vasculature is happy and it is allowed to heal then we get benefits. And I think those are medicines. I think I'm not as knowledgeable in your world but y'all use those things for a long time, correct.

– We have we have, you know something interesting people who have been our patients throughout this pandemic usually have line and co infections with bartonella babesia, garlickyum, tick-borne lapsing fever.

They have mold issues, They have parasites, all these infections all at once. They have a high load of environmental toxins so that it makes them inflamed.

It makes their blood sludgy. We've seen this. So even as when we draw their blood, like say the nurses drawing their blood, you know to take a to take some vials for a test, it comes out looking like cherry cola. Right?

And so we've been seeing this for years and years and our patients who have in our patients for this pandemic. They didn't seem to get long Covid why you already had them on these things already treating the infections that could have been stirred up by the cytokinestorm from Covid as well.

We're already taking, you know, removing that sloppiness from their blood with the and so who's walking in our clinic are people who are new with these with these infections?

– Exactly. And I would say the interesting thing about Reza before, you know, Reza's history before Covid was really trying to understand why chronic disease conditions, things like diabetes and other like Hyperlopidemia.

rheumatoid arthritis.

Triple Therapy and Treatment Approach

Those kind of things had a higher incidence of strokes and heart attacks and those kind of things. Now we kind of assume that statistically, uh, you know, that that happens. But the reality is we only know that statistically we don't positively understand yet why somebody with diabetes is more likely to have strokes and heart attacks. But Reza was kind of on the train the last 10 to 20 years saying, you know, what's different about their blood is some, I mean, don't get me wrong, there's inflammatory changes.

But the other changes had to do with the with the throng biotic system and those were structural changes in fibrin activation of platelets into these real changes.

All of them all exist. And that's what I think, I think the next 10 years of medicine is gonna really be about thrombosis inflammation. I think the inflammation, inflammatory system and inflammation has been Incredibly explored in the last 20 years. The problem is is the downstream or what I would say is is really you can't talk about one without the other is that the inflammatory system causes dysfunction into the end of helium.

And the helium itself is a very thrombin attic system. It tries to protect itself. Okay. And so when it does that it's mouth adaptive. So when you rev up the inflammatory system and damage the epithelium, it's gonna make these kind of clotting cascade start.

And when it does that, this is where you get oxygenated and this is where you get healing and it's not gonna happen because if it's not working. So that that's so I think the next there's actually interestingly enough, one of the things I'm seeing when I put people on triple therapy is especially my diabetics all of a sudden their sugars are so much better controlled.

And it's it's fascinating and what we're realizing and uh and there was actually uh an article is a kind of a translational research article in the Journal of American Heart Association talking about that the the platelets and hyper activation of platelets and micro thrombosis or what we call thrombin inflammation involved in diabetes.

And they were starting to suggest alternative additional therapies that are non insulin related to help manage diabetes. And one of those was a direct oral anticoagulants, which is.

And so it was just funny to all of a sudden see that they had already kind of started to see this too, which is maybe some of the way to control diabetes and the effects of diabetes are to deal with the throne biotic system, not necessarily with the glucose system.

– So the suffer lining through all this medicine is really growing. – Exactly. – We're learning so much more now. Yeah. Tell us about your success rates using the triple therapy using it.

– I've used it probably and around 300 people now. The first interesting thing and you were talking about this a second ago when you say that your patient's blood was already sludgy.

I've had almost nobody have any bleeding issue. In fact, very few of them outside of women that are of menstrual age that that working around that seems to be a little bit. I mean that takes a little bit of time.

But outside of that that very few people have had issues with bleeding. I had one patient that had maybe a urinary bleeding or blood with his urine but there's a reason that he did that because he had a lesion in his bladder, which is good to find out correct. I mean, so most of the time if you bleed from one of your orf orf asses with on blood thinners, it's it's not a bad thing as long as you can stop it because there's probably a reason you need to inspect and see what's going on. So that's just kind of a caveat but pretty much everyone has a benefit.

And again it's a selected population. it's not against people. I don't, you know, again, this isn't a randomized control, but the interesting thing is, is probably, I would say 100% of people at least have some benefit. And that benefit for the most part is up to 80 80% you know, back to normal, I will say a lot of the people that don't have chronic disease states that are also young almost have 100% resolution.

But it's the people that have, you know, chronic disease states like rheumatoid arthritis, Lyme, that they see benefit and it's probably they get better than they've been in a long time, but they're the ones that are harder to stop the therapy and because they feel so good and they're just, they're there of a little bit different ill because they have to, we have to kind of um, you know, work around the fact that they have, you know, other inflammatory disease processes going on.

And so that's kind of um, I will say that, you know, kind of the three worlds of covid that I look at our, you know, the viral replication, the immune activation and then what I would call the, you know, the end effects of the sludge left over or what I would call the destruction that happened. And if you deal with just the destruction and you haven't actually gotten control of the inflammation or stop the replication and this is probably, you know, sounds sounds like rocket science in mind, but in your, your world, you probably already know this.

It's it's not, you know, focusing on the end result when you hadn't gotten the people that are actually making the mess taken care of, you know, it doesn't do as good.

So sometimes we have to back up and and work on that end. So – Right, now I have a feeling I go, you go ahead. – Oh, I was just saying. So, so success rates are pretty incredible.

It's the closest thing I've ever had where people come back, just thankful. And kind of life changing. It isn't perfect yet. I'd say that's why I'm very hopeful of getting a trial. I think Reza and Jacques are doing a trial because there's a couple of questions we don't have answered yet.

And one of those is, how long do we do this? What is the possibility of re occurrence of these micro clots? And then the interesting thing is a lot of things that I've picked up in the clotting world, because, you know, for there's about 15% of people have some type of inborn issue with um what I would call either coagulation or fibber analysis and sometimes I've been picking that up as an 18 year old that I just picked up that has a genetic abnormality in plasminogen activator inhibitor, uh which is interesting because most of the research is on uh from people that have had early coronary bypasses and awful myocardial disease in their 30s. And so he's 18 and I don't know what to do with him finding a genetic abnormality already. I mean definitely it's good because he's not gonna die you know in bed with his wife one night and not have his two kids to take care of from a heart attack. But you kind of go well now what do we do?

Is this something we need to keep him on? You know co I guess covid brought to light an abnormality that probably we would have never found. So there's still some still kind of parsing through that and what what to do about it?

I mean you call the cardiologist around here and talk to him about that and they don't even know what you're talking about because I mean it's kind of a relatively new.

The clotting system is very complex and we are learning more about it every day. So when we find some of these genetic abnormalities, I mean a lot of people, especially in their kind of coronary disease world, don't even really there.

Like and that that's like a new thing we found like eight years ago and I'm like yeah but what do we do if an 18 year old has it? And it's like uh you know, again that that that so the propensity to clot is uh and the propensity to have these issues sometimes is genetic it probably all is genetic, but sometimes it's genetic in a way that we can pick up on it.

And then when you pick up on it, what do you do? And that's something we're trying to figure out. So, – Right, so I have a feeling a lot of doctors watching today tell them more about the triple therapy so that they at least have a place to begin.

– So the triple therapy is really uh comes from how Jacques was treating acute covid. Again, covid itself and the spike protein rev up the body's inflammatory system in a way that causes this abnormal deposition of fibrin that's resistant to fiber analysis.

And because it's resistant, not impervious, you have to hit the platelets and fibrin kind of like basically gotta at all different points. And so the aspirin for the most part stops platelets from sticking to each other. For, I mean, it's pretty elementary uh description, but Plavix stops those platelets from sticking to the endothelium, which is the lining of the vessel.

And then fibrin or the director or anticoagulants. Eliquis it actually stops the fibrin from coming out of the plasma from fibrinogen into fibrin which is kind of like the mortar for these micro clock complexes.

So basically, basically you're not allowed to make micro complexes anymore and it forces the body to break down. So we call it triple therapy, interestingly enough, it's weird a lot of people sit there and say, well how about just one or two or three? It's weird.

It requires all three. That's how resistant these things are to fiber analysis. Usually I start people on these things. I also put them on stomach protection and usually the stomach protection I like to use is famotidine, which actually is a, you know, histamine receptor type two blocker, which actually has some benefit when we talk about mass cell

activation, which these micro plots do activate. And so there's kind of a dual benefit there.

But the key is is you want to kind of, you don't know how much ibuprofen these people have been popping because they're miserable and so you want to make sure that the worst thing that could happen is is eliminated, which would be a G.

I bleed. So I usually start patients on this. I let them know that this is um you know obviously an off label therapy but these medicines for the most part are safe. They outside of you know falling and having a traumatic brain injury, which I don't recommend that for anybody.

Uh you know, if I tell my patients if you're planning on having a traumatic brain injury on the way home, let me know because we don't need to start this.

But otherwise, you know, as long as they're not cleaning out their gutters or skydiving, uh their risk are pretty low, as long as they live in a place where you know, even in the worst thing having a bleed, they would be able to, you know, basically go and get a blood transfusion.

And I've done it on 300, probably over 300 people. I don't know the actual 300 what number, but I've had no patients been required to have any transfusions, I will say. And we can talk about that later around the time of menstruation. It's a little bit different.

Uh Women themselves are having menstrual abnormalities related to covid as well as the vaccine. As the literature just shows you its immense and the amount of different changes. So these changes for most of them aren't that abnormal because they're already had abnormal. You know, they've already had abnormal cycles for a while. So they're just like, oh you mean like the ones I've been having? But that area is a little difficult. And then the older patients, it usually requires you know, having them come in and see you pretty pretty often checking CBC really patting them on the, you know, making sure they have somebody that cares for them.

I don't really give this somebody who lives lives alone over 65. I mean it's you know, something that I would probably want somebody to watch out for them let them know have a family member, understand what's going on.

But the results are great. I mean usually within a month, the first two weeks. Usually what happens is imagine a lot of little sludge or micro clots breaking up and that is, we actually do know that within these micro clots are platelets factor for any plasma or alpha to any plasma. And those are actually the signals that tell your body to stop breaking things down. Okay. And so, but they're also inflammatory. And so as those things are broken down, a lot of people say, hey, I feel like something's going on in my chest.

I feel like my heart is racing. I feel like my cough is a little worse. I feel like my, you know, my toes and my fingers feel weird. And the funny thing is, is that has nothing to do with the anti coagulant itself is not a side effect. It's, it's the anticoagulants working meaning these little areas being broken up, like little dams that are opening up.

And the first thing that a lot of these tissues are going to do is want to release all the garbage that they've had sitting out and ready to go for a while.

And so I always tell people the fact that they have, you know, if you take this and nothing happens, I probably picked the wrong patient. But when a lot of these patients, you know, within the first seven days say, I don't know what's going on, but something's going on.

That is a good sign. And so I think, you know from weird headaches again, the meninges is very vascular and so people who have chronic migraines or headaches, those things usually start to change a little bit.

I've had a couple of people to say who had brain fog that all of a sudden they can't go to sleep anymore because their mind is racing. And again those are good things.

I mean they're they're you know, they're getting blood supply there, getting oxygen to areas that they probably

haven't had in a while. So temporary too. I think yeah it goes away.

I mean usually within the uh the longest I've ever seen is in the first two weeks and sometimes during that first um you know week I'll even do you know, nebulizer destiny or maybe even a steroid. So I kind of suppressed a little bit of that overreaction of the immune system. But you know, it just depends on the person. And I think um the key is is that if you inform the patient to expect this first of all, I mean the mind is a powerful thing but so there's nothing better than a side effect. Not a side effect of the medicine but a side effect of the treatment that is discomforting being a confirmation to them that it's working because then they don't call. So um you know it's it's it's a good way for them to be excited about something that doesn't feel great.

So so that that but it took a while to learn this because when you first see it, you say, okay, the physiology makes sense. Here's the things to do it.

And I really had never, you know, a lot of the things that I would use this for was an acute covid. People feel so bad. Anyway, they're probably on some steroids or other things from acute covid that's still coming off. When I started to use anticoagulants, I didn't realize that this was gonna be an issue when you use it in somebody that's really way out from their initial event. It definitely um is stirring things up, like sweeping in a place. I mean, the air around there all of a sudden gets dusty as you get rid of the dust. So um that that's to expect.

And usually for the most part, people who are fairly easy, it's a month of therapy.

Outcomes, Risks, and Open Questions

Most people, it is, you know, anywhere from 2 to 3 months, the one month people are young and they usually may have only had omicron, they probably had covid or their event within the last six months seems like the longer or the farther away from their event they are, the longer it takes.

Some of that might have to do with the variance in terms of each one is different in terms of its ability to cause uh coagulated abnormalities, we've seen that, I mean, the delta was very clot um, clot heavy and then, omicron really hasn't necessarily been as clotting.

But again, it's kind of a cumulative thing because somebody who might have had delta alpha and then they get omicron all of a sudden, it's almost like this cliff, they fall off that all of a sudden there fibber analytic processes were fine until they reached this threshold. And then it's just not working anymore.

And then they say, well now I feel awful and that where that kind of brings them into the clinic. So um that's kind of some of the history I get and finding out, we'll just kind of describe the chronology of where you are.

The other thing is is the nice thing about this theory and I don't really think it's a theory anymore per per se. It's you know, true. Pretty well established uh understanding of what the disease does is that it affects when you think about long covid and how it affects every system.

It pretty well explains all the different aspects and those aspects are all at added source, low local tissue hypoxia. And so, you know, your brain doesn't work well, the mitochondria doesn't work well.

Uh so that's where you get brain fog all the way down to uh you know, I'm having, you know, tachyarrhythmias and those tachyarrhythmias or because the myocardium is unhappy and they're alerting you that it's not getting oxygen well all the way down to the muscle tissue that's getting this chronic ischemic re perfusion injury, meaning you're going and doing something. And then, for the most part, you're going from aerobic to anaerobic soak quickly and then there's a release of lactate and reactive oxygen species. And then you can't even get rid of those.

The missiles are angry. So you, for 30 minutes, you did something and then you it's like you ran a marathon when all you did was do something for 30 minutes. And so that's what we call post exertion malaise, which probably that lingo is very common in y'all's world.

But it's the nice thing. And that's one of the reasons that's so frustrating about the current system is a lot of these people prior to Covid or their event. They were healthy and now all of a sudden, you know, statistically it's very unlikely that they develop for chronic diseases.

You know, after this, but that's what they're specialists are telling them they're sending to a neurologist, a cardiologist, a poem, a pulmonologist. And they're saying, well, you have this, this, this and that, Well, it's it's a lot more likely they have a disease that they know they had and the consequences of that disease involve all the systems in the body and that's why I think um this understanding of what's going on for the microvascular, obviously the inflammatory system is super important in this too.

And that affects all organ systems, right? But the fact that the micro circulation being slugged up is is paramount in understanding the not only really, I'd say acute covid, but definitely long covid. That it's that's why you're not at a academic medical center. That's dividing up the domains.

I mean most long covid clinics that you come in, they evaluate you and they send you to four different specialists who don't have the prism to understand the disease because they don't even understand the disease is a vascular disease. – Right now, would you say it has to do with the spike protein being stuck in those areas?

– So we definitely know when we look at the spike protein on these promises the big promises that we can actually get our hands on. There is they can stain for spike protein and they don't stay necessarily for the RNA for the virus.

They actually just stain for the spike. But the spike protein itself is the thing that sets off this abnormal coagulation process. So it is likely that if you have persistent spike protein, which there are reasons, especially people who don't have great clearance um that they would have that that they would continue to force the body to make these abnormal change.

I mean, but the spike protein, there's a lot of stuff. It will listen. You know, interleukin six uh depress is uh interfere on alpha. I mean, all the things that are important.

And so it, despite protein, to me, not only to me it's just in general understood now that it is the pathogen and the pathogen is what disrupts all of this.

I mean, I don't think there's been one paper written about the nuclear caps that are nuclear protein, which is probably what's more important in your actual uh you know, long term immunity to this is having antibodies to the nuclear capsule or nuclear protein.

But there's not one paper I can find in pub med that talks about it causing uh causing issues physiologically. So it's funny in America at least they're still kind of dance around the uh the the point. But you know, even there's a great uh there's an interesting um article that's actually American uh was a journal of the American cardiac cardiology, clinical cardiology that looked at six in the myocardial biopsies from vaccine myocarditis, Which they thought was my card. It is by the way, it actually ended up that when they did the pathology on them and looked at the history pathology, they didn't have any evidence of myocarditis.

Instead they had evidence of small infarct, which by the way, would be micro thrombosis. But they also did seven COVID-19 into cardinal injuries or cardiac injury. And here's the funny thing that the papers point was that the histone pathology as well as the genetic changes.

We're the same. Okay, and so they actually, again, this is from Colorado and Vanderbilt, they said at the end, the micro pathology appears that it might be the spike protein.

Again, I mean this is something that came out like two weeks ago and you go, y'all are two years behind guys. I mean this is you know, this is not um I mean they're like saying, saying something like they found the holy grail and you're like, well just open up the literature and look at what Europe is doing.

There's no question that that's the issue. They know it and we're still stuck trying to figure out well what's doing

this? Well, we know it's doing it.

It's an inconvenient reality. But with that we need to change pretty much the whole response to it and a lot of the rest of the world is doing that. – How would you say the rest of the world is doing it that we're not. What would you like to see happen?

– So, I mean, I think understanding it is a multi systems disease, I think most importantly is understanding the spike protein as a pathogen. I mean, again, we're the only country in the world that doesn't have the inactivated viral vaccine, okay, meaning like the Indian co vaccine, I mean, vaccines themselves all have, you know, their risk.

But when you talk about the risk of an of a what I would call active um you know, production of the pathogen versus an inactivated passive mechanism in an inactivated viral vaccine. I mean there's a reason that most of Europe doesn't want much more of what we have to offer, even though we act like we have the envy of the world's vaccines. The reality is we don't India actually made probably a much better vaccine than us. And we have uh really been pretty arrogant to say that we don't want it. We're really the only country in the world doesn't actually doesn't have it approved. So not that I'm vouching for the vaccine.

It's just interesting to look at the literature because again, it's mechanism is a classic mechanism, a passive mechanism and it doesn't actually have to do with the it still has something to do with the pathogen, but it's it's much more like your flu shot than it is like these genetic vaccines that we have.

So I think that's one of the responses. The other is to understand that the thing that kills people with this disease is clotting both in the short term and the long term.

And we have once we understand that and understand it as a vascular disease, you look at it completely different. – Thank you so much. This has been so informative. I'm just so happy to have you here.

Is there anything else you wanna tell the audience? Do you feel you covered it? – No. The other thing is I think the beautiful thing about this is understanding the micro clotting process.

I think what Reza and especially in your world Reza and Doug are starting to realize is this is part of a lot of chronic disease states and I think us understanding this and developing much better treatments than what I'm suggesting has a lot of hope for the horizon.

I think that's fantastic. I mean the silver lining of all of this so. – Sure is about what you suggest is key. Honestly, it's it's not looked at, it's not thought about at least not in this country, maybe this much, you know, so you just brought to light so much Key critical information for the audience which includes doctors. So I think that a lot of doctors are gonna listen to this and and start to change the way that they're viewing their patients, the way they're they're treating it. So this has been huge.

Thank you. – And I would I would challenge them just to go to pub med and look up COVID-19 coagulation and meaning like just start doing your own and you will be blown away by what you have not been told.

– Right? Well, thank you so much for being here. – Well, I've enjoyed it. Thank you for having me. – Thank you.