Research Review of Spike Protein Nanoparticles and the novel mechanism for immune activation Transcript

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Introduction and overview of spike protein concerns

– Dr. Mobeen Syed is with us today. We're gonna be talking about obviously the spike protein and how it affects. Um first it's in the blood but how how it also affects um the olfactory nerve and then a little bit about the uh blood clotting issues. That Dr. Pretorius has done a lot to bring to our attention. Dr. Been keep calling you that, but I guess you're used to being called after Been at this point. – I am totally fine being called Dr. Been, Mobeen Syed, whatever way you like.

Thank you very much for having me. – My pleasure. So let's let's start off with talking about the spike protein and um how often and where and what and the nanoparticles, what that has to do with our concerns. – Excellent.

Thank you very much for this opportunity and welcome everyone to the talk. What we'll do is this first of all I would request you to have an open mind.

And what do I mean by that? Don't expect that if I talk about spike protein in the blood, that means I'm saying Spike protein is in the blood of everyone and we are all doomed. We have to have a balanced approach to understand the mechanism. Then we see who is affected.

How much Second is this also does not mean that the spike protein being in the blood is the best thing that could happen after a vaccine or the infection.

Spike protein mechanisms and immune activation

So there are good and bad of this and then there are certain general mechanisms of immunology that we cannot discount the reason I'm putting this in front of us is I received many times comments from my audience where they say that why don't you say that this is bad but these are normal immunology immune mechanisms and we have to understand them and then we can make our conclusions later on.

So with this I'm going to share just quickly just as my habit of sharing the references. So I'm going to do that with Dr. Gordon's discussions as well.

There is one link over here. You can actually see this in this is in science direct and this is 17 March 2022. Very fresh study, immune imprinting breadth of variant variant recognition and germinal center response in human cells scope to infection and vaccination. This is an interesting one that I would use in our discussion today. Then this is another study.

It is in Nature. SARS Cov2 is associated with changes in brain structure in U. K. Bio bank. And then this is another study. This is in the journal of immunology and this is circulating exorcisms with covid Spike protein are induced by fighter biotech vaccination prior to the development of antibodies in novel mechanism for immune activation and M. RNA vaccine.

Then this is another study. This is about the SARS COv2. Spike protein impairs and ethereal function via down regulation of Ace two. And then there are some more topics that we'll discuss later on.

So if I back up for a second. Now let's have certain facts about spike protein in front of us. Number one, we know that spike protein as we know it for the sake of two binds with Ace two.

We also know that when it binds with Ace two. And even if the virus does not enter the cell, just the binding of the ace two with the spike protein and the stimulation of the S.

Two can cause a dis regulation within the cell. This is a known mechanism and that is the reasons are many. For example. There is one reason that this spike protein starts the internal cellular mechanisms through is to stimulation that um change the cells function towards nitric oxide. I I notice with colored or just let's simply say towards the pro inflammatory state of the cell.

Similarly, spike binding to the Ace two can also disrupt cells own internal defense systems. In addition to that, spike, spike binding to Ace two takes the ace two enzyme away from the normal ace to function that is done in our bodies angiotensin system where we try to create a balance between S enzyme S2 enzyme.

Ace enzyme is anti inflammatory. Sorry, pro inflammatory is too is anti inflammatory. If you take these two down then pro inflammatory part stays up and we we develop a state of inflammation.

What does this mean? This means spike alone coming from the virus or from the vaccine. When it attaches to the ace two, it puts us in a dis regulated cellular state plus in a pro inflammatory state.

So that is first thing to take away. Now that Spike is produced today or tomorrow or a month later or two months later, a year later, whenever it is produced, this is a possible disruption of our system that it will produce good.

So that is one. – Right? And and this will happen with the infection or with vaccination correct? – And the intensity of that would develop that. Which thing caused?

How much of it? If somebody has a severe covid infection, they may have a lot of spike running around in their blood and causing this damage. If somebody is not responding very well to a vaccine, they may have a lot of Spike produce that may spill into the blood or or the local tissues and cause the issues.

Right? So we cannot generalize that with Covid. Everyone will have severe case or unfortunately die. We cannot generalize that no one will respond negatively to Spike in with Covid.

So, you have seen you being audience here, you have seen the spectrum of issues with Covid and with vaccine. So that is what I wanted to make sure that we are on the same page. Second part, Spike is an antigen.

It comes from outside our body. Does not like molecules to come from outside that are of certain shape or character or size and it attacks them when it attacks them.

When the antibodies are generated, those antibodies themselves are not only to wipe this spike away, but when the antibody and antigen they bind with each other, there are further biological mechanisms that become active.

For example, compliment system becomes active which in turn causes more inflammatory responses in the area of activation. For example, the liver starts making more more inflammatory molecules as part of the acute phase responses. For example, when the antibodies get attached, the antibodies that have spike attached to them are nt gen attached to them.

When these antibody settle on various tissues, they can start inflammatory responses on those tissues causing local damage. Now, in case of Spike, what kind of damage is we can look at there can be vascular damage because Spike antibodies can now start settling on the blood vessels surfaces.

There can be clotting because the Spike and the antibodies can attach to the plate Tech Factor four or the platelets that are present within the blood vessel and start the the clotting factors. We will discuss Dr. Razia Pretorius theory or research that they see that not only the platelets are activated but general clotting factors become activated in presence of Spike. And clotting can occur.

So not only Spike is directly harmful. Spike can actually cause immune dis regulations, which in turn can cause inflammations clotting and depending upon what tissue would is on the damage to that issue or reaction from that tissue.

So I hope that we can now agree. And I can show you references some of those references. I just showed you. We can agree that there is a problem if we have spike in our body.

Now, this is also correct that having the spike in our body allows our body to be trained trained against the spike. And so that is really the thought behind making vaccines with the spike.

And that is also the thought behind expecting the spike from the virus to help us become more trained against the virus for the future infections. – Yes, it's it's the double edged sword of any vaccine, – Correct the question.

Now, there are three important concepts in the general public now about Spike in the blood. One theory concept somewhat correct and somewhat incorrect, has been out there for more than a year now and that is that there is a Japanese study that showed that spike protein goes to every part of our tissue including ovaries and causes damage there. The paper itself doesn't talk about damage.

That damaged part is connected separately with these kinds of studies. If I if I just one very quickly show here again. See here this study, SARS COv two, Spike protein impairs and ethereal function.

We are down regulation of phase two. So, from these kind of studies, we can infer that Spike is dangerous. Then when you come up with another study that says Spike goes everywhere in the body. Then we connect these two dots and we say, well that means the spike is going to be dangerous for the whole body including ovary?

And the person will become infertile. And so so clarification. There again, I wanted us to have an open mind. I am not pro spike or anti spike. I am going to present the um mechanisms and then we will all have to do our own thinking and discuss with our own doctors depending upon our conditions, everybody's going to be different.

That paper was not about spike protein instead. And I'm going to share my screen and draw this time. So instead, what that paper was talking about was the following. So here is a cell here is a lipid nanoparticle, Lipid nanoparticle that is in these modern vaccines.

This lipid nanoparticle is made up of four pieces of lipid. Imagine this is a purse, you know, the purse, the bag, handbag, Imagine it's a purse or a handbag which is made up of four kind of components for kind of leather or canvas or uh cloth, whatever. Out of these four, there are two that were known already and our body has them for example, fast food, alcohol in our body already has it. If it is present here as well, we know what happens to this. And then there were a couple of pieces here that were new. The question in these researchers mind was, what happens to these pieces, Where are they broken down?

Are they broken down inside a cell or they come out in the cell and broken down somewhere else. How are they removed from the body? That was the basic intent of understanding and that was actually Pfizer sponsored study.

And again, I'm not a big fan of Pfizer, what I would like us to have the accurate understanding of these various studies. So when we say that it is dangerous, we are quoting the correct study and we are not dismissed and when we say that this is not dangerous or here is a far Mako dynamic behavior, we know that so this is the study they wanted to do.

Lipid nanoparticles and vaccine pharmacodynamics

Now we also know all of us that inside this lipid nanoparticle is messenger RNA. The paper I actually after all those conspiracies that come up, I sat down with a Japanese friend who was actually in Japan at that time, he works in Japan.

I requested him to translate that in my presence on zoom so I can understand what was written there. So I didn't have to use google translate and what that said was the following. The lipid nanoparticle goes into the cell, it breaks open And so let's say these are the four pieces and now they have broken open.

The R. N. A. Is used up inside and they said we are not studying the RNA is dynamics because we expect and they

may have been wrong, they say we expect this RNA to be used up inside the cell and we destroyed inside the cell.

However they said for us even for the spike they said we're not studying it and you could fault them and you could say no, you should have studied the spike as well.

They said we're not studying Spike because we know that that spike is also going to be broken up inside and some of that is going to be on the surface of the cell.

And so we know the fate of this spike. The thing they said, we do not know is this new part of the leper nanoparticle and we wanted to understand where will it go And what they realized was they radio labeled it, but they labeled it so they could trace it and they found was that these pieces actually some of them ejected from the cell. And it is actually understandable why they would reject their lipids.

Lipids can just like they can enter the cell, they can exit the cell as well. On the other hand, M RNA or proteins cannot just get out and get going. So they said these lipid pieces, they came out and then they circulated in the body 80% stayed at the site of injection. The remaining went to various parts including ovary and deliver and the other places.

Now if you said why would that go to ovary? The basic answer is very simple. When we have something in our body most of the time. So let's say this is our body most of the time when we add something to the body, that something usually goes everywhere in the body tissues unless it is specially made in a way to not do that.

For example, we could make the Dr. Gordon is here, he can attest to that. We could make type of intravenous fluids in which there are molecules that would not leave the vascular system and kind of provide more molecules within the vascular system.

And now that is something that would not go everywhere. On the other hand, we can make things that would stay within the extra cellular fluid but not go in the cells and there are things that can go into the cells and so on the if we're not careful for those things and whatever is added.

For example, when we eat food and that food has let's say lipids in it and those lipids are absorbed in the body, they're going to go everywhere and every tissue is going to pick up whatever it can and it needs.

This is why these pieces of of the lipid nanoparticle were picked up by many, many tissues including of course ovary and liver. So this specific study actually did not talk about spike protein going everywhere in the body and causing the damage.

You could once again, as I said before, you could fall to this study to say, why did they not do it? Why did they not look at the spike protein thoroughly as well? And you could say that is their issue.

Okay, now this is one study I wanted to clarify about this one second study or let me explain this. Sorry, – A quick question. The lipid um that's, you know, the fossil type of Colin gets metabolized but this lipid that's not being metabolized. – It does it does slowly correct, correct. So what they said was they said, and this is what they wanted. This is exactly what they wanted to understand.

Where is it metabolized? How long does it take to be metabolized? Because this was a new kind of lipid and they found out 80% gets metabolized at the injection site?

The remaining 20% then circulates in the body and it is cleared within two days to eight days. And I think it is understandable. Some tissues have a greater metabolism, some have lesser metabolism. So it depends which tissue has picked it up.

I would say every tissue in some quantity that is proportional to the circulation for that tissue and then based on the metabolism or metabolic activity of that tissue and the enzyme levels of that tissue, it would break it up right away or it will break in a later the late state. Hopefully that answers the question.

– Yeah. Well, I guess my other point is there any, is there anything unusual about this lipid that like you say, it's not something we usually ingest is what was I don't want to play too much time because we're talking sure today. But um was there something unusual about this lipid in this structure or in its function?

– So um no, this was a new kind of a lipid that was not manufactured in the body before and they found that that gets destroyed as well or gets used up too.

So nothing other than correct. So what was the purpose of this study then? The purpose of the study was Pfizer or Moderna or some other vaccine company or a drug company I've ever met in right. Any drug when it is going to be written in a book, there are going to be in pharma book and Dr. Gordon?

You know this in pharma book, we will write that here is a drug. Here are the properties of the drug. Here are the pharmacogenetics of the drug here are far Mako dynamics of the drug here is the benefits of its side effects of toxicity of it, poison poisoning of it, How to prevent that. How to prevent toxicity and what are the indications and contraindications and so on, correct?

How do you take it? How long do you take it? So, for Pfizer vaccine, this was a study actually asked by fighter to understand the pharma co dynamics of the lipids of the lipid nanoparticle which would then become part of the literature. This was not a hidden study, this was not something that was a conspiracy or they hit something.

So again, if it breaks down this concept, if someone was holding this concept that that study proved that Spike grows everywhere. So of course you're you're gonna hate me now to say, well he's saying it in the opposite direction but we should keep correct messages from the studies. So we are not misquoting and we are not dismissed. Okay, so now I'm gonna go to the second mechanism of the immune system. Now immune systems mechanism for vaccine, let's say. We inject a vaccine in the deltoid muscle.

What happens? And here there is a possibility that some of the spike protein is going to get into the blood. So let me explain that part. So here let's say this is a cell and this is a lipid nanoparticle. And that lipid nanoparticle has the M.

RNA in it. When it is picked up by the cell, the messenger RNA becomes free, it becomes attached to a ribosome. A ribosome would use the the recipe. If you will and make spike proteins.

These spike proteins would enter end awesome and awesome is a compartment in the cell that's whose job is to shred up the proteins that are formed and present them on the surface as well. This is equal to whenever you eat food, you always take a bite, chew it and then take the tude part out and put it in a plate on a side to tell everyone this is what I'm eating. The cells do this all the time.

That whatever they make they always put some pieces out as well for the immune system to inspect if the cell is healthy and whatever it is doing is correct or not now piece of the spike protein or they say that in some cases the whole spike protein getting appearing on the surface of the cell would then in turn cause the immune system to respond.

And in that response not only immune system will become triggered to understand what it is and react. This cell will become a target to be killed as well. That is how immune system works.

Now this is happening in the muscle. So I'm gonna try to make a big deltoid muscle. So let's say this is a big big deltoid muscle. Some really muscular guy or gal. So this is happening right where the vaccine was injected. However what happens is there are local lymph nodes. So let's say near the deltoid are axillary lymph nodes that are present in the armpit. So there are local lymph nodes as well.

And some of these cells are actually going to go to the lymph nodes and present these spikes or or the intelligence to the to the tissue cells or the immune cells B cells and T cells and follicular helper T cells and dendritic cells and so many other immune cells these cells will bring the antigens to the lymph node to activate other cells there.

Then it is possible that some of this M. R. N. A. And these things might actually be brought in here to.

Spike in blood, lymph nodes, and bone marrow

So there is this study which came out a little late but it was a very interesting study uh that is this one immune imprinting breadth of variant recognition and germinal center response in human cells, infection and vaccination.

So what they're talking about is this area in the lymph node is called. There are small tiny pieces here or areas here of activity. Imagine small small factories. These are called germinal centers inside the germinal center. They found that even up to two months after the vaccination, the cells sitting here were expressing the spike proteins.

That was interesting that in the germinal center of the lymph node the cells were expressing spike protein which also means that there would be some spike protein that would get out from the lymph node and circulate in the blood number one.

And if it goes in the blood. Now we have already established that that spike protein can then bind with the S. Two and the endothelial cell cause and ethereal vascular dis regulation this spike protein can go to heart and maybe cause inflammatory responses there. This spike protein can bind to antibodies and then antigen antibody complexes will be formed and these will cause local information maybe to heart blood vessels or other tissues. We've already discussed that spike can cause damage in two ways by directly attaching to some surface or by binding to the immune system and activating complement and the um the antibodies and so on.

So this is one possibility that spy can continue to spill into the blood through the lymphatic routes for even two months. According to that study. The second thing that they say is that it is interesting that they within the lymph node the activity with the spike protein and the generation of the spike protein continues for so long. That means our body keeps trying to understand and fight and and learn for so much time they call this imprinting immune imprinting that is happening within the lymph node.

Now I wanted to add something to this and this is not the study. Now talking immunology what happens is when there is an infection. This is although we have given a vaccine it is not infection but the mechanism that would come into play is the same as an infection. So what would happen is whenever there is an antigen Let me say it instead of infection.

Some immune cells will take up residence in the area where they found the antigen. So it is possible that some memory B cells and T cells might start living here.

Mostly this happens in the G. I. T. For example around throat or nose and so on then. So this is one. I have a point in this when I say they live here.

Second is some immune cell will become memory cells and start living in the lymph nodes, local lymph nodes we call them that is the lymph nodes closest to the area of exposure.

Thirdly some immune cells would depart from the lymph nodes and they would be memory lymph nodes. Or sorry lymph cells, B cells T cells and they would start circulating in the blood circulation and they will be found circulating here for months.

So that is three and fourth some of these cells will pack up their bags and go all the way to the bone marrow. So this is my weird bone. So my apologies.

It will get better in a few minutes as you keep watching it. So here so this is a kind of a very short femur. But anyways this is a femur. Right So here there are some cells that would start living in the bone marrow.

The cells that would live in the bone marrow that they can live there for decades now if they are going to cause a problem. So let's say with this by protein or with the covid these cells are hyperactive dis regulated cells And now they are living in the bone marrow as well. They're gonna sit here and make their inflammatory molecules for a very

long time.

And guess what? Inside the bone marrow live other cells as well that have taken residents here of course inside the bone marrow there are stem cells and we're making more red blood cells and white blood cells and so on.

But in addition to that there are external immigrant cells that are coming back and taking up residence here as the memory cells which are going to be long living.

Now when a new memory cell comes in and starts releasing molecules that is going to activate the other memory cells unknowingly unwantedly. And these other memory cells would start making antibodies to whatever they react to.

And then another very important thing is in the bone meadows we have E. B. V virus gene containing B cells as well and so they can become activated all of a sudden the person may develop allergies and they would say I never had these allergies.

Why do I have allergies? Well here is why they had some B. Cell sitting in here for let's say against Poland and they never bothered to create antibodies. And they were just sitting there as a memory.

But this new cell comes in and starts shouting at all of them and says you should become active. And this little polen responding be Celsius. Okay fine I'll make antibodies.

I'll do class switching. Class switching is when A B cell goes from making I G. D. And A G. M. To making I G. G. And G. E. And I G. A. That is class switching and I G.

We know when that is released I. G. Can go prime the mast cells and mast cell in turn take part in allergies. So all of a sudden there is a possibility that we have inadvertently created a cycle where we are protecting ourselves from SARS Cov two and we are vaccinating ourselves or we had an infection and bodies trying to do all of this to protect us but we may actually activate other immune responses as well.

So here what is my message? The message is Spike protein can actually be found in the blood after the vaccination or infection as part of normal immune response or mechanisms.

However the question is quantity, quantity and quantity of that Spike protein would determine the outcome in many people. The outcome is simply just training of the immune system and done. But you know that in a smaller number of people this can actually become severe outcome even resulting in people's death or long covid occurring with becoming a chronic disease or vaccine injury resulting in people suffering for a long time. And this.

– No no no keep keep going. I was just gonna comment that this is is beautiful because it it just so nicely demonstrates how your baseline status often has a large large is a large component of whether you do have a problem with the the infection or the vaccine because it's what's already living and you know you have these overly primed um memory cells in your bone marrow usually because you haven't you haven't given them the self destruct signal.

So there's a little minor problem and self regulation to begin with. And now you just threw a lot of fire on that. – Absolutely. And and to and to to strengthen that a little more. And the reason is not I'm not sitting here people who have heard me on my channel, they know I'm not a conspiracy theorist and I do not propagate conspiracy theories.

Hear from a mechanistic point of view, what is interesting as a doctor is that the cells that end up in bone marrow, it is very difficult to remove them from there. How will you remove a resident B cell sitting in a bone marrow? The only way you could do that is to kill that B cell. But how do you target that B.

Cell? You can not. The other way is to kill the whole bone marrow that is like a cancer treatment and you don't want to do that for let's say somebody got long covid and they've gotten B cell sitting in the bone marrow being upset and releasing stuff forever.

How are you going to stop them? So this is why the long covid from covid or vaccine, lingering injury from vaccine tend to be there for longer time. And secondly, tends to be cyclical in nature.

The reason it becomes cyclical is that whenever our immune system becomes activated with that activation. So I'll give you my example, let's say I decide we're all friends and we're all immune cells.

And I say to my other friends, you to say, you know what, I'm gonna go have a fight with this virus and I'm going to become an active B cell or a T cell. So you say fine, don't get hurt.

And in this process also we are going to send with you this extra cell who would make sure that the fight comes to an end as well. This is our body's immune behavior that whenever we start inflammation, we also activate T regulatory cells or Yoshino fields can do that as well.

But mainly t regulatory cells whose job is to then calm down the inflammation and turn it off. Sometimes those regulatory cells when they become active, they would stop the inflammation and will feel better.

But at the same time, once inflammation has stopped, our cells can become re triggered and they would start the relapse. This is how we can explain the cyclical nature of long covered or chronic disease.

The other possibility of cyclical nature is re exposure. So let's say we have all these trained cells sitting in these four places and they're ready to fight and then comes the infection or the antigen and they start fighting.

And now even if we do not know, even if it is a symptomatic, we might internally start having the fight and will develop immune related symptoms instead of infection related symptoms. So this is the second part I wanted to clarify, that's why can be found in the blood. The question is really quantity the third part and I know that we are at 36 minutes. So I hope it is useful as a topic instead of a broader width of the topics that we wanted to do today.

The third part is another study here, which says cutting edge. That means really fresh heart of the press circulating exorcisms with covid spike protein are induced by Pfizer biotech vaccination prior to development of antibodies.

So what are they saying here? What they're saying is the following, they said we we took the blood samples. So let's say somebody Who had the does one of the vaccine.

And then those two of the vaccine, we know from our previous literature that once you give the does one, it's not necessary that we have enough antibodies that can be of much protection.

Then even after those two, we say that 7 to 14 days it's various vaccines have various times. So let's just use 14 days for our purpose, After 14 days, there is enough antibody levels that they are protective.

So I'll make something like this.

Exosomes and systemic immune signaling

These researchers said that while body is trying to make the antibodies in the meantime in the blood of the vaccinated person and they said even infected person, this would happen. But vaccinated person, what they saw was that from the cells. So if I make a cell let's say this is a cell which got vaccinated and the vaccine material went in and it's making um spike proteins inside the cell.

They said from inside the cell these spike protein got loaded on exorcisms. And I'll explain what these exorcisms are and then these guys came out and these exorcisms loaded with the spike proteins. Then we're running around found running around in the blood. So the first question, what are these exorcisms?

My simplest answer is just like lipid nanoparticles are something that tiny lipid particle that contains RNA in it and we inject from outside imagine the cell inside of it is making lipid nanoparticles. So of course these particles have the capability of getting out.

So what we say is vesicles vesicles as tiny droplets within the cell. Tiny purses, tiny pockets, tiny balls, spheres vesicles from inside the cell that would get out are called exosomes. Somes are these are tiny bodies but exo is that they would get out Now every cell can make exosomes which will get out.

However, this cell that has gotten proteins in it. The spike proteins may actually have the spike protein attached to the excess home. And those exosomes are getting up and so I am saying may this study actually shows that it does. – Yeah. And when I say which makes perfect sense because we know in chronic illness of chronic inflammation in the body makes more exorcisms that the the components, the single lipids and ceremonies, the things, the chemicals that make up exorcisms are elevated in almost all chronic inflammation.

So this is a normal process. It's we just have an extra uh extra passenger, – Correct, correct. We have an extra passenger and that is the the spike sitting on top of this thing. So here this is a study here which they have shown this biotech induces release of excess um carrying suspect to spike protein on it.

So it's not a conspiracy theory that old man Mobeen said something that is really not to be said. This is accepted and printed in the Journal of immunology. And look at the date over here, November 15, 2021 is I believe when this must have been the one uh to be accepted. And then whatever is the publication date is when it was published.

So let me explain then. What do what are the researchers saying here? We have to at least be able to understand what they're saying. What they're saying is that we see excess um everywhere in the blood.

And their point is something else. So, they're not saying this is dangerous. Don't do this. They are actually saying they're saying very interesting. They're saying this is normal.

Number one and number two again in your mind right now, there would be a question, This is B. S. This is not normal. This should not happen totally fine.

We know that the vaccine, the spike can cause damage. So got it. Let's follow what they're saying. You could hear what they're saying and then dismiss that and then lay a layer your own thought on top of it to say, well, I don't feel comfortable with this, that's fine. So what they said was these excess um when they entered the blood circulation, they would inevitably reach spleen as well.

Spleen is a tissue that the blood has to circulate through with every time heart is beating. So they said, when these exorcisms enter the spleen, the macrophages in the spleen, the immune system cells in the spleen are going to catch these exosomes, they're going to eat them up and then they will train the immune system cells present in the local area. So they are saying it's not just that the vaccine is inducing the immune responses in the deltoid and in the local lymph nodes. But through these exosomes, the vaccine is actually inducing immune reactivity in spleen as well.

So they're kind of saying, well, we found a new mechanism of this vaccine, we didn't expect this to happen. And then of course people are saying, well we did not expect the exercise with the spike protein to happen, Why did that happen?

And then they did one more thing. That was very interesting and that is they said we picked up these eggs awesome from the patient's blood. And we injected these exosomes in rats.

So usually draw nice, beautiful pictures because I have references in front of me. Now, I don't have a reference. So this is my rat and I am sticking with it.

So hold on this is the rat. And this is this is the rat. Okay, So they put those exorcisms in direct. So imagine these exosomes which have which have spike protein on them.

They kind of acted like imagine like Novavax or Medic Argo like vaccines which are nothing but bouquets of spike protein. So here they have spike protein and that book is given to the rat and they said that what they found was that with the spike protein in the rat, the rat's immune system became trained against this spike protein.

And so when the actual virus was exposed to the or when the rat was exposed to the virus rat was able to defend. So they said, well, this is a very interesting new mechanism that we did not know.

We were suspecting that this is what happens. But here we found something new as well. – And again, this makes perfect sense for how the immune system works.

I mean they we communicate with exorcisms. We just didn't realize. But I think the kicker here is again, is that the fact that we the spike protein itself seems to be so immunogen IQ compared to many other proteins that our body is exposed to.

Olfactory nerve damage and brain effects

And I think – Absolutely and Spike protein, I mean look at the people who develop vaccine injuries or who develop long covid after covid, Spike protein is such a weird antigen that in some people it can cause a punishing response by the immune system and a long term injury. – And I would just I mean I just want to just point out to people that one of the things we have to remember.

I mean because when if you're having this problem and you happen to see this um you know how beautifully you laid it out, it can sometimes sound like hopeless, oh my God, this is in my bone marrow and I'm doomed.

And I think we always have to remember that the body is able to heal many of these issues because our we're constantly exposed to things that stimulate our immune system and it's Dr. Been has been mentioning, it's the t regulatory system and also the B cells regular. That will quiet this fire down and usually you will recover and there are many interventions that we'll talk about hopefully in our next um meaning and test that we can use to help help your immune system do this task.

So it is definitely it, I want people to understand that this is a cycle that can be turned on and also is designed to be turned off. – Correct. And I will give this uh whenever I am discussing concepts with my audience, they always say on one hand, we look at the mechanism and it looks scary.

On the other hand, we should look at the clinical outcomes around us to also balance out our observations. For example people who are getting covid, you must have heard this a lot.

That only a very tiny fraction of those end up in a hospital and only a very tiny of those fraction of those die still huge damage that will be incurred as humanity.

But if you want, if you felt scared then please realize that those who are becoming infected, they had spike protein in them as well. And then very tiny number became severe enough or died.

Similarly those who got vaccines you have, I'm sure a lot of people around you who are vaccinated and are fine. But then there are some who get injured as well.

So the whenever you're thinking about these things, you have to do yourself a favor of looking around to see what do I see clinically around me? Is that good or bad or balanced or not balanced?

Does that make sense? – Yeah, it's just so you know, we always have to remember the denominator effect that you know yes, there's vaccine injuries but we've given you know by this point, probably close to a billion years in America when you think about 200 million times two or three, you know 600 million doses at least.

And most people have done well. It's just that when you don't, we have to work on trying to solve the problem by understanding the physiology. The more we understand the better tools we can develop.

– Got it. So if you like we have some more time would you like if I discussed the olfactory nerve and so that is covid infection, the supporting tissues problem and then the brain, the impact on the brain tissue.

Would you like me to handle that or discuss more on the spike side? – Yeah. I I think I think you can maybe just by talking about the old factory and the damage to the supporting tissue.

It just again we're trying to do is is broaden the I like people to understand that things are not black and white and that the way the way the body of the complexity of the system to me gives her hope because we don't have to be we don't have to find the exact answers.

We often just have to nudge the system and the the the example of how of how important the supporting cells are to function gives us a different ideas of helping rather than thinking that like my nerves are damaged and I'm doomed. So I think the olfactory tissue would be a good place to start. – Okay so let's do that discussion as well.

– Yeah – So here is the Study this study is in nature. It was published I believe here March 2020-7, March 2022. So rather recent Um it says Sars Cov2 is associated with changes in brain structure in UK Bio Bank.

What they did was in their bio bank there is a bank where some folks who die they donate their brains or body tissues. And so they have brain tissues there.

And what they do is they prepare those brain tissues by taking thin slices of them and they can then use them as comparisons references. They can look at a person what kind of disease they had and then look at their brain to see what is the effect of disease to the to the person and so on.

This is a study from there and what they found was I'm gonna summarize it for us. What they found was that people. So now we're talking covid and not vaccine.

Although you may have seen that even with vaccine, those who become injured, they have neurological symptoms. So there may be a similar mechanism going on with the vaccine to I'm going to look at what this particular study says and they're looking at covid patients. So here is what they saw.

They saw that in the covid patients. So let's say this is the skull of the patient and here is the brain in the skull. The brain became a little less accurate.

So so let's say this is the brain of the inside the scalp. They said that those who were covid patients Some of those had up to 20% reduction in the global brain size. That means every part of the brain reduced equally And the overall brain tissue reduced by 20%,, which also means so in the brain of course we all have this human brain and we all know how it functions and what kind of things it can do.

The frontal lobe here is responsible for what we say is the executive functions or our personality. Then there are areas here, hippocampal areas and the amygdala and other olfactory areas. There are areas here that are responsible for the limbic emotions and memory and decision making.

Our decision making is mostly attached to our emotions. If you like something, you would make a decision to like it and do more of it or go more towards that and if you hate something you would your brain would make a decision to kind of stay away from that. If you don't care much about something then your brain makes no decision. It just ignores it.

This is what they found. The question was why? And before you even I go there, what can be the outcome? If somebody had covid, what could be the brain issue.

For example, they could have personality disorders, decision making, could become disrupted or incorrect. People might say that hey, you used to not do this and now you're doing this, that's what secondly the difficulty to arrive at solutions or planning can become an issue event planning can become an issue remembering people cognition can become an issue, recalling can become an issue now in the memory area, emotions can become incorrect in the extreme cases a person might actually not do the socially appropriate behaviors because this area has become disrupted.

So memory issues, emotional issues, decision making, issues, cognition issues. The question now was why and the thought and this is their hypothesis that the olfactory nerve, so it's in the roof of our nose, we have a bone that is perforated, we call it crib reform plate, crib reform plate or the or a plate or a bone with the holes in it.

Through those holes. The olfactory nerve branches pop out in the roof of our nose. And when we when this seems like a big nose of my apologies. So here is the nose.

So when the and it's not here, it's a little back so don't take this as anatomically correct. Um No, the whole thing is wrong. Sorry. So when the molecules come in that are going to attach here, they would create various kinds of smells.

And and then those smells will be used by us. Now the brain looks too small with this bigger skulls of my apologies. So there are smells those smells through the olfactory nerve will go back and attach here in the hippocampal area.

Magdala. Then with the limbic system, the point of these smells is we not only smell something to smell it, we also use that with the with the taste to create a flavor.

So that is one integration. Similarly, smell is integrated with the food as well. So sometimes when you smell something that say you smell delicious mangoes, then your visual system would remind you that there are mangoes somewhere nearby. Or if you see mangoes then you might get the smell of the mangoes refreshed in your brain.

So visual system is attached to it. Similarly auditory system is attached to it. You could hear some sounds. For example, let's say the sound of rain could start a feeling of the smell of the rain that you that you smell and vice versa.

Similarly smells are attached to the personality and the limbic system because all faction is a very important sense that we use for meeting as well. So you must have seen animals, They work with the smell for mating purposes.

So they said that what happens is so this is a different study and I had discussed this study about a year and a half ago. What happens is the SARS cov 2 can infect the supporting cells of olfactory mucosa.

What does that mean in the olfactory system? So let's say this is a branch of the neuron, this is the olfactory bulb and it has many branches coming down.

These branches of the nerve are supported by the local epithelial cells here. This is happening at the roof of a nose. These epithelial cells are supporting these these fibers, they are nourishing them. They're keeping them healthy.

They're keeping this area healthy. You can imagine them as the the servants to the nerve cells and they're serving this area to keep it healthy clean.

Nourished nutritionally well fared and so on. SARS COv two infects these supporting cells. It doesn't infect the nerve itself. It infects the supporting cells.

When these supporting cells are infected, they become inflamed. This is a normal behavior wherever we get an infection we get inflammation we get inflammation and the local inflammatory markers and the swelling and congestion.

So all of a sudden the nerve is involved because it is compressed because it is now drowned in the congestive materials. Now there is a local fight going on inflammatory system and there are cells that are releasing inflammatory markers and toxic substances which can start damaging the nerve. It is also possible that this inflammatory system then propagates through the nerve to the inside.

There is not a lot of study done on that And the reason is very simple. Imagine if you have the infection and the

doctor comes over and says I'm going to start taking biopsies of your nerve and the brain to see what's going on.

You would say get off of here right away So they don't have much other than patients who have died and to look at their brain tissue. So the thing that this inflammation occurs that causes this olfactory nerve not to function correctly when it does not function correctly.

That disuse of the olfactory system from the brain tissue then causes the brain to have disuse, atrophy or reduction in size because the cells are not being used. Why are they not being used?

Because the sense of smell is not working correctly. This is why I'm going to stop here with this one. This is why it is important that if someone has anosmia they seek immediate help. I have seen in my practice that Ivan Mactan has been very useful but speak with your doctor to make sure that if you have anosemia, you seek some solution for it. And if let's say with various drugs, it's not going away. Then nasal retraining or olfactory retraining is very important. So you start teaching this nerve to work again so that the brain tissue attached to it does not become a trophy it.

So that is the second part that I wanted to discuss. – Thank you so much. I'm there's so you so much more to go and uh and I but the immune discussion, I would really urge everyone to really listen to the, to this again. Thank you so much and again and I just want to emphasize again, Is that what you are explaining so well is the basis in my mind of most chronic illness. It just not all about covid and not all about spike protein.

This is your immune system designed to protect you and occasionally causes long term problems. So thank you again and thank you all of our listeners and I look forward to sharing more.