

Rheumatology Ref 168RM

Draft Transcript

SPEAKERS

Robert Moots, Steven Bruce

Steven Bruce

Good evening and as always a warm welcome to the Academy. It's so great to have you with us. And I'm sure you're going to have a really fascinating evening CPD with us this evening. You know, I'm, I'm pretty convinced that most of the speakers we have on this show are fairly eminent in their own way. But sometimes you just feel a little bit overawed by the CVS that you read. And tonight's no exception. I'm joined by Professor Rob moots, who is a professor of Rheumatology, but he's not any run of the mill professor of Rheumatology. Not only does he have a medical degree, he has a degree in immunology. He has a PhD from Oxford, he's lectured at Harvard, he's been a keynote speaker on every continent on the planet apart from Antarctica, sadly, he's written over 200 articles for the prestigious medical journals, again, none of the run of the mill stuff. And he's actually been the editor in chief of the journal rheumatology. Give him 5 million pounds of research money and he and a small team will find out what neutrophils have to do with rheumatoid arthritis. And I suspect we'll hear a bit more about that later on. And his centre of Rheumatology in Liverpool is a European Centre of Excellence. Add into that in his spare time he climbs Kilimanjaro in Everest. Rob, it's great to have you with us. I'm glad you've got some spare time to spend on it.

Robert Moots

Well, thank you very much, Steven. It's really good to be here tonight. Thanks for inviting me. I'm looking forward to a really fun evening.

Steven Bruce

Well, I hope so too. We were talking, I was mentioning just a moment ago that you've done a lot of work on neutrophils and RA. And I wonder if we could start with that because it sounds interesting. It has implications for testing for RA, I gather.

Robert Moots

So it's kind of funny, really, in my scientific training, I was interested in a certain type of white blood cell called a lymphocyte. And I used to throw away these contaminating cells and neutrophils. But of course, neutrophils are the most abundant cell in the human body in the immune system, the most abundant white cell. And when I moved to Liverpool, I learned I was doing a really crazy thing, I was throwing away the really important cell that we have been studying ever since. So that's kind of transformed our biomedical basic science research where we've reoriented things from one white cell to another white cell. And trust me, there's a very big difference between the two.

Steven Bruce

Does it have implications for our understanding of the white cells themselves? Because normally don't we associate neutrophils with bacterial infection?

Robert Moots

Absolutely, we have. We're here today enjoying this, this broadcast because we're alive and we're alive because we have functioning neutrophils. Without these white blood cells, we'd be dead if the infection and we wouldn't survive beyond the first few months. So neutrophils are crucial for life. But the problem is that they can go wrong. And we've been studying how they might go wrong to cause inflammatory problems, such as rheumatoid arthritis.

Steven Bruce

And what's the implications of what you've discovered?

Robert Moots

Well, it's been very difficult in the past to try and target neutrophils because if we think neutrophils, white blood cells are causing problems, that means that if we can identify that we can try and selectively switch them off to stop the problem, but stop us from dying of infection. So some of the work that we've been doing has sound, just that we've actually found a way to switch off all the bad function of neutrophils, and that's causing various forms of arthritis, but in no way affect the really crucial role, which is to protect us from infection. So that's been a very interesting breakthrough. And this is something that we're kind of looking at as time goes by, as to how that might be used in a whole variety of diseases, and also potentially COVID.

Steven Bruce

Really, in what way?

Robert Moots

Well, in COVID, one of the problems is that a few people, a small percentage of people become very ill, because they have what we call a cytokine storm. And that's kind of like mutiny in an army. It's like friendly fire. It's like nuking a whole ammunition, dump and exploding everything inside the body. So again, one of the things we found is a new medicine that we've been helping develop for osteoarthritis can also switch off some of the inflammation chemicals that can cause really bad COVID. So I'd have never thought as a rheumatologist that some of my work could have even be useful for this terrible COVID epidemic. Watch this space.

Steven Bruce

I'm not sure I've seen anything about that in the press or the general press. Has there been anything published about that?

Robert Moots

Yes, the has. There's been a couple of press releases from an article that we've published midway through last year, where a new medicine that is being developed called APA. And I can tell you more about that later. We've been testing the effects on neutrophils and as I say, we found exactly that. It can switch off neutrophils from producing the very toxic IR six and other inflammation chemicals but no effect on them killing bacteria. I think that's actually been on the on the The front page of The Daily Express apparently,

Steven Bruce

that would explain why I haven't seen it then. We've actually had a question that came in very, very early from Amelia. It's connected to rheumatoid arthritis. Amelia says that she wonders about the significance of a positive rheumatoid factor and whether a high level would lead to Ra. Well, Amelia, that's

Robert Moots

a very good question. Because in rheumatoid arthritis, we can measure things like rheumatoid factor. rheumatoid factor is an antibody. The trouble is, though, it's often positive, and people with rheumatoid arthritis, it's often also negative. So having a rheumatoid factor that's positive really doesn't help us very much. It doesn't help with the diagnosis, because Healthy People can have rheumatoid factor. And Amelia if your mum has got rheumatoid arthritis is a very big chance that you will have rheumatoid factor. But hopefully, you'll never have rheumatoid arthritis. So, diagnostically, it's not helpful. But prognostically, it can be helpful, because if people with rheumatoid arthritis have got a very high amount of this antibody, rheumatoid factor, then they're likely to do worse, or we need to target our treatments better. There is a different type of antibody, the so called anti CCP, or ACA antibodies. And these are much more sensitive, correlating with rheumatoid arthritis. So rheumatoid factor, old news, anti CCP antibodies, more current state of the art ways for making diagnosis.

Steven Bruce

I think I read in, in your bio, that one of the things that come out of your research is an ability to determine which medications are going to be effective in treatment of Ra. Is that the case?

Robert Moots

So that's been some very provocative results that we've been finding what we've been doing again, to go back to these favourite cells, the neutrophils, we take people with rheumatoid arthritis, we purify the neutrophils, we do what we call transcriptomic analysis. So that's like the next generation of genetics. So genetics measure the genes that we've got, we've got the same genes in every cell in our body. But sometimes in some cells, some genes will become activated, and in other cells, other genes will be activated. If we measure the transcriptome, we're measuring genes that will become activated. And when we look at that, in patients with rheumatoid arthritis, we find some very provocative signatures, which if you've got that type of signature, it can help predict response to some of the really expensive designer drugs, that TNF alpha inhibitors. It's still early days, but it looks very promising that

Steven Bruce

right, okay, and so what now then is the medication of choice or general prognosis for people with RA, because it used to be a pretty depressing disease to have didn't it?

Robert Moots

It was an awful disease before my time, which wasn't all that long ago. rheumatoid clinics, rheumatology clinics will be full of people in wheelchairs. And it's not a surprise because we were just terrible at managing this rotten disease. We'd wait until people were almost in a wheelchair, before we actually use the drugs that are likely to work. So we waited until there was damage, then we gave effective drugs, and it's not surprising, they weren't very effective. So the way that things have revolutionised is that our job now in Rheumatology is to prevent damage. So we want to use

the powerful drugs before the damage occurs and stop that happening. And that's really revolutionised the treatment, even with the old fashioned drugs such as methotrexate. If we use the older drugs better, there are better outcomes, let alone the newer generation of biologic drugs. Right.

Steven Bruce

I suppose I what I should have pointed out to everybody before we started is that when I look at the list of things that you treat, it's pretty much everything which is auto immune or ends in it cirrhosis. So there's a whole load of stuff on the list of conditions that you cover, and I don't want us to be constrained to rheumatoid arthritis or ankylosing spondylitis, which was actually on the holding slide this evening. What is it you treat most of

Robert Moots

because again, you are at you are a clinician as well as a researcher as a boss. In fact, most of my time is actually looking after patients. And it's funny because as an academic, your hospital wants you to do all clinical work, but your university wants you to do all research. So we have to try and balance all of that. So I'm interested in situation where there's inflammation. I'm not very good at sprained ankles. I'm not very good at a little bit of wear and tear. But I'd like to think I'm better at inflammatory problems. So that can be inflammatory arthritis, like rheumatoid arthritis, ankylosing spondylitis, it could be vasculitis, which is a really strange group of diseases with really weird names, where you can get any any bit of the body going right And funnily enough joints tend not to be affected. So as a rheumatologist, people always wonder why we do vasculitis and other things such as lupus, which is a very interesting inflammatory disease causes a lot of problems and can be a real trip to treat. The one that perhaps would be the most unusual is a disease called baches syndrome. Now, betches syndrome is a really weird and rare disease in the UK, where again, people can get all sorts of problems, particularly ulcers in various places. eye problems can cause blindness, strokes, all of the things you don't think a rheumatologist would see. And strange stuff, we developed a National Centre there. So there's a lot of patients we see from all around the country in different countries with this weird condition that people can't pronounce the name of, let alone understand much about

Steven Bruce

Yeah, I was interested to read about to bed chest disease because that's just one division of vasculitis as a whole, isn't it? And I guess the thing that strikes me about this as you know, I mean, the audience this evening, we have some medical doctors in the audience, but largely it will be osteopaths, chiropractors, and physiotherapists. So, we're used to dealing with the physical signs and symptoms that people present with. But I noticed that when we look at SLE or lupus, when we look at bets and things like that, quite often, they might present with things which could be masquerading as mesquite, musculoskeletal problems, and so perhaps you can help us in making sure we can find them out to the appropriate expert at the earliest juncture.

Robert Moots

So lupus is a very good example of that lupus is an autoimmune disease, you can make an autoimmune response against your own cells. And you can measure antibodies against your own DNA. That's something that can cause sore joints. It can look in many ways similar to rheumatoid arthritis. But lupus is named lupus because lupus is Latin for wolf. And one of the problems in lupus is that people can get a rash, particularly in the face, across the nose bridge of the nose and cheeks

when they go out in the sun. And strange enough, that's where the myth of werewolves may have come from. Because people who had lupus wouldn't go out in the daytime, if they did go out in the daytime, they've got a strange butterfly shaped rash, that if you've got a bit of a warped imagination, you might think somebody is turning into a wolf. So joint problems, skin rashes, hair dropping out in clumps, those are sort of things that make me think about possible lupus because although the joint problems look similar to rheumatoid, and people can get deformities, they don't get joints being eaten away with erosions in the way that happens in rheumatoid arthritis. So I suspect some of you will probably have seen lupus, certainly, it's common enough that you will likely to be seeing patients with that. And if people do have that, they can have sore joints, inflamed joints, but it tends not to damage joints.

Steven Bruce

Right? How common is the rash because it's not universal isn't?

Robert Moots

It's not but it's one of the defining features of lupus in most people. It's not that you see somebody coming in looking like a werewolf. It's more like people would say, you know, when I go out in the sun, I get a bit of a scale Enos on my, on my face on my cheeks, it will probably be the present in more people than not. And it would be a warning signal that there's potentially some autoimmune disease. Now, I don't know about you, Steven. But if I go out in the sun, I can get a Canada, prickly heat type rash. And I think it's very healthy to stay away from the sun. So everybody can sort of say, I might have a bit of a problem in the sunlight. But in lupus, it's very different, very striking, and very different for what any of us might get if we'd got in the cell.

Steven Bruce

Right, so easily distinguishable, say from someone who simply gets a sort of a blush like rashes. It's scaly, you said earlier on.

Robert Moots

Yes, it's scaling. It goes across the bridge in the nose. Those are the sorts of things that are red flags for that and also, many people could notice hair getting a little bit thinner. But in lupus, it tends to come out in patches and can lead bald clumps around the scalp.

Steven Bruce

Okay. You'll find Robert I'm going to have to go back in time a bit for occasionally in our conversation, because when the questions come in, they might not have caught up with with our conversation. Peppers sent in two observations. One is that the cytokine storm was a common problem with the first SARS virus as well, but I think that's it's a well established connection between the with Coronavirus who's on board. But she also says do asks whether GPS routinely test for anti CCP.

Robert Moots

Well, people that's a very good question because GPS would always tend to test for rheumatoid factor. And that may or may not be helpful because a lot of people with rheumatoid don't have rheumatoid factor. And a lot of healthy people do have rheumatoid factor is very Trouble in different parts of the country in the UK, and in different countries, the accessibility of anti CCP antibodies in primary care in many other countries is very readily accessible. In the UK, the UK NHS tends to

sometimes in some areas limited to rheumatology, which is just the way it is really. So rheumatoid factor helpful, but don't make a diagnosis based on that. Anti CCP antibodies, if you actually detected it does mean something. And the funny thing with anti CCP antibodies is that you can get some healthy people walking around with lots of anti cc antibodies, but be very healthy. But in the future, they have a very high risk of developing rheumatoid arthritis. So it can be predictive.

Steven Bruce

Right? So do we actually answer the question of whether GPUs are sending people for anti CCP testing is in

Robert Moots

some parts of the country requested? It's certainly readily accessible in secondary care. But in primary care, some GPs can access it, and some can't.

Steven Bruce

Right? John's asked whether somebody with an autoimmune disease of another nature is predisposed to Ra?

Robert Moots

Well, John, you're, again, a very good question, what we tend to find is, if people have one type of autoimmune disease, they're a little bit more likely to potentially get another one. And if you have a family history of autoimmune disease, you've got a higher chance of having an autoimmune disease, not necessarily the same as your family member, but it does increase your risk. And that's something that's telling us that there is a inherited risk from this, it's not entirely genetic, because environmental factors play a role as well.

Steven Bruce

Okay. And somebody unknown has asked whether gold is still prescribed for IRA.

Robert Moots

It always makes me think of gold finger, Steve, and when you promised that, I mean, how, how cool would it be to be given intramuscular gold, you kind of end up thinking about that poor girl that was painted over in gold in the in the James Bond film? So it's an interesting question, actually, because gold is one of the best drugs to treat rheumatoid arthritis for effectiveness. But it's one of the worst drugs for risk of side effects. So we could really work out what the good effect of gold is a bottle that put away the problems that gold can cause it will be a real winner. So it's very, very rarely prescribed. Now, when I was a medical student, many patients wrong gold. And doctors tended to give it until the patient got a side effect, which could include death. These days, I can't think of a single patient who's on gold, because we have lots of good alternatives now, that are also say,

Steven Bruce

what were the other side effects other than death,

Robert Moots

it can cause bone marrow impairment. So it can cause problems with red cells, white cells, platelets can go too low, it can cause renal impairment. So whenever people came in for a gold injection, which would be initially once a week, and then the gap increased to once every month or two,

always you're in will be checked to make sure there's no blood in the water, and a full blood count will be checked to make sure there's no cytopenias or low blood counts.

Steven Bruce

Thank you, Claire's asked whether we still think HLA b 27, is implicated in inflammatory problems.

Robert Moots

For sure, Claire, it really is. We don't quite understand why there's a lot of theories, but HLA b 27, is a tissue type molecule. So that's one of the things we measure when we're looking at transplantation. And looking at people's tissue type is a class one MHC molecule that's responsible for presenting foreign proteins who are not necessarily foreign but proteins to immune cells to lymphocytes. And it's clear that HLA b 27 is a normal tissue type molecule that many of us will have. But if you do have it, you've got a higher risk of having conditions such as spondylitis. Or if you want to be more accurate, Sera negative axial spondyloarthritis, which is a huge mouthful.

Steven Bruce

Oh, well, I interviewed somebody in somebody on that term several, several months, if not a year or more ago, and they insisted at the time that it was spondyloarthropathy, not spondyloarthritis. And that was even more of a mouthful. Especially for simple people like me. Sarah asked about the current thinking of on exercise and autoimmune pathologies, and she says that one of her patients recently told her that he'd been advised not to overdo it because he'd further damage the joints. Is that true? Because the patient hasn't done the exercise since he was about seven. Not that we know how old he is at the moment.

Robert Moots

I'm a big believer in exercise, Sarah, and I think the key thing is not whether you do it in Not, but how you do it, and how you pace yourself. If you think about it sahra muscles are made to work and joints are made to move. If you're not working muscles or moving joints, you run into problems. I think one of the key things is if people have an inflammatory arthritis, it can be sore to do that. And I think it's important to be able to teach people about joint protection. And about the best time to exercise is not the sort of thing that one would do during an active flare of inflammatory arthritis. But when that flares being controlled, it's very important to be exercising, so you can build up muscles, protect the joint and maximise function to the future.

Steven Bruce

So what would your advice be, then to this patients of Sarah's who's not done in the exercise since he was seven, I mean, presumably, you don't want him out sort of exercising to access, there has to be a point where you say, you know, enough is sufficient. But it

Robert Moots

depends how old he is. Now, it could be 1727, or 97. I don't know many people who don't actually feel improved, better and more healthy, if they're able to exercise. The problem is as close patient, if you're never done, it is quite hard to motivate people to do it, is quite hard to actually get things going so that they can get out being fresh out or in a gym, and actually enjoy the benefits of that. And I think that's really an issue perhaps of us as parents, and the parents of this patient who maybe for the best will in the world have tried to protect them, if they've had sore joints, maybe had juvenile idiopathic arthritis, and really, perhaps IRD on the really exaggerated side of just protect

yourself, don't do anything. So managing that I think is a really big challenge. And there's a whole range of ways that one can try and overcome that. And in a young person, it can be having video games that are actually linked into movement. And certainly there's a professor in Liverpool that's developed a video game called I think the Goblin post office for children in the Children's Hospital in Salta, hey, where they be playing a computer game with the whole body. And in order to play the computer game, they've got to move around, and that's exercising, but they probably wouldn't realise it. And it seems to have really good outcomes.

Steven Bruce

Okay, so we'll represent will recommend the Goblin post office for Sara's patient and see what happens. Pierre has asked about hereditary traits and whether anyone can develop rheumatoid arthritis or rheumatological conditions? Or do you have to have some sort of hereditary trait? And also, could you also expand when you've done that on the the medication you mentioned for osteoarthritis earlier on?

Robert Moots

So yeah, it's clear that there isn't a genetic inheritance risk for rheumatoid arthritis. And we can do these things called jiwa studies or genome wide association studies where we look at a huge population of people with a particular disease like rheumatoid arthritis, and see how the genetics differs. So we can see a few hotspots of genes that seem to be linked with rheumatoid arthritis. On the other hand, we've looked at identical twins. And if we have two identical twins, the risk of one of them having rheumatoid arthritis means the risk and the other one is about a third. So in other words, if you've got the same DNA as your identical twin, you only have a third chance of having the disease, but a two thirds chance of not having it. So that's really telling us that the genes can be important, but we also need environmental triggers. And for a long time, people have wondered what the trigger would be. There's a thought that smoking, cigarette smoking could do that. And there are lots of links between pack ears. That's a cumulative exposure to cigarette smoke, and the development of rheumatoid arthritis. So there's some kind of smoking gun, part of the problem there. The other thing would be infections. And since we know, rheumatoid arthritis and other autoimmune diseases are caused by the immune system going a little bit haywire. It stands to reason that things that might stimulate the immune system might trigger that off. But the problem is, nobody's ever found the infection that causes that. So with regards to inheritance, it's a multifactorial thing. With regards to environmental triggers, we really don't know.

Steven Bruce

That's interesting because Helen asked which environmental factors were most likely to be a problem and what what advice you give but are there any that you can identify other than smoking?

Robert Moots

I think a good thing Helen would be to not smoke or to advise your patients to not smoke. I think that's a no brainer for all sorts of things. We can't advise people to be away from any micro organism or in fact Otherwise, we'd be just locked up in a kind of a sterile bubble. So So really, we can't answer that. One tantalising thing, though, is that if people have a Mediterranean diet, which I don't think just means plenty of red wine with your meals, although that could be a very nice thing. But actually olive oil fish, the type of things that people eat more on the Mediterranean Mediterranean than perhaps here in Liverpool, that's associated with a lower risk of rheumatoid and

also less severe disease. So perhaps one thing that we can advise people is to have a healthy diet. But exactly what type of a healthy diet? We're not entirely sure about.

Steven Bruce

Rob, we're going to ignore your racial slur on the Liverpudlians around you. I'm curious, though, because whenever this sort of thing comes up. Are we talking about an association between Mediterranean diet and good health or a causal relationship? Because most people who use a Mediterranean diet are probably very interested in their own health family?

Robert Moots

Yes, I think there is some scientific evidence that if people change the diet to a Mediterranean diet, their rheumatoid can statistically improve. It's not a cure, but it does seem to be a measurable difference. And that's a kind of a known important thing. On the other side of that there are a lot of people that make a lot of money. Sadly, from advocating very dangerous diets, where there is no scientific evidence whatsoever, either theoretically, or practically, that excluding certain foods can help but again, a lot of people talk about, for example, excluding inverted commas, acids, or tomatoes, or onions, or Perish the thought curries, which is perhaps my favourite food, I think life would be too short not to be able to eat any of that. And there's no evidence that those sorts of things do any harm, with the exception of curries, which is the opposite. There are various components of the Herbes in curries and the spices that may well benefit people. So that's another good reason to eat curries.

Steven Bruce

Well, that will be musics. And Victoria's is because she's asked what your view is on natural approaches for inflammatory brain, such as curcumin, if I pronounced that correctly.

Robert Moots

So by by natural products, I think these are things I it's a difficult one to answer, Stephen in some ways. And Alan because I think we have to be looking at things that can be helpful and complementing treatment, because I don't think there's really any way around a good medical treatment. Although there are various diets, we should claim to do that. I think looking after yourself being healthy, being careful to eat well, is helpful. But it's an incremental help, rather than a kind of a quantum help, as far as the evidence seems to go. So being healthy, eating well, looking after yourself. Again, it's a no brainer, you'd expect people to feel better. And indeed, studies show that they can do.

Steven Bruce

Well, on the subject of nutrition, I noticed one of your areas of expertise is vitamin D deficiency, which is interesting for champions as you can't go out in the sun because it gets Berkeley heat. And Jason has asked about this Monday, he wants to know your opinion on the effects of vitamin D on inflammatory levels in the body and the link to inflammatory conditions.

Robert Moots

While there's a clear correlation between vitamin D deficiency and immune system function, so Letterman DS as a whole range of things. And in recent years, we've found how important it is in the immune system. It's also important to remember that once you get north of Watford, in the UK, there's probably not that great sunlight to be able to have good vitamin D levels throughout the year.

So the vast majority of the UK population will probably be seasonally vitamin D deficient. So I'm a big advocate for taking supplements of vitamin D. Interestingly, I was getting some lectures and Q eight, which is the hottest country on the planet. A vitamin D deficiency is absolutely rampant there for the simple reason it's so hot, and so much so that people cover up all the time so that they don't get despite all the great sunshine, enough vitamin D on the skin. In the UK, we kind of expose ourselves within kind of sensible limits all the time and a little bit of sun comes out. But in the Latitude North where we are, that quality of sunlight, apart from a month or two in the summer probably isn't enough. So I would certainly advocate everybody. Be careful about having determined the supplements. As long as you don't take a bucket full. It's not going to do any harm, and it's only likely to do your good.

Steven Bruce

We also have a chap called Simon billings on the show. Some time ago, I think he's one of several who've talked about vitamin D. And he was saying that half an hour in the summer sun with a reasonable amount of skin exposure gets you 10,000 international units equivalent of vitamin D in the body. So it's actually very hard to overdose on it, as you say, unless you're going to take bucket loads of the stuff. But I mean, but all the people who've spoken about it have said that the NHS recommended or the national recommended daily intake is very low, and in fact, probably should be exceeded,

Robert Moots

indeed, and the jury is still out as to exactly what the threshold should be. With regards to supplementation. given us, you're quite rightly saying, Stephen, it's hard to overdose on it. I mean, obviously, within limits, I think it's good to be taking it to my wife certainly made sure that I have plenty of vitamin D each day, which is very thoughtful and nice. And, and also, I think, extremely sensible.

Steven Bruce

Now, I've had a couple of questions in about some psychological components in autoimmune diseases, one from David, one from Pip. Pip, asking whether stress is a big potential trigger, and David saying that psychological trauma he's heard can be a factor. any evidence for that? You know,

Robert Moots

absolutely, David and Pete, you're caught, you're both entirely correct, both from a stress angle, and a psychological angle. And many years ago, people and patients would always say that some diseases they felt were triggered, or caused by stress. And I think many doctors sort of poo pooed that, and I think you've got to be an arrogant doctor, or rather a very blink adopter not to be listening to your patients. And since patients are consistently saying these things, I think there's going to be something in it. And what we found as time goes by, there's a very close link between the brain between the endocrine system, for example, the adrenal glands that will make caught natural cortisone, steroids, the pituitary gland, and also the immune system. So alterations in the stress in the body are likely to impact on the immune system. So there's actually a scientific rationale for that. And certainly, many years ago, we we published on a drug that was used as a major tranquillisers people that are psychotic. And we actually found that that actually had an impact on the immune system itself. So in a bad way. So certainly, we have learned that in many things, not just natural stress, but pathological brain problems or psychiatric problems, that there is an interrelationship of

what's going on and body. And that kind of makes sense, doesn't it? Because you know, being healthy, you have some people who have such a positive attitude for life that they seem to just sail through without any problems at all. Maybe part of that is that by being stressed three, by being positive, by having such a good outlook, that perhaps minimise some of the immunological problems that can otherwise cause disease, who knows.

Steven Bruce

But as I say, there's a certain amount of stress in my chair at the moment. So a quick note for my team, could you please cut down the number of questions in my active questions column, because I can't keep track of them. But a number of them have come in with green flags on sync, which means I've got to ask them straight away, and they're all about diet. Simon wants to know what happens if you can't eat well, if you're allergic, for example, to cruciform vegetables. So I'm getting outside your area of expertise in nutrition here,

Robert Moots

that's really tough, and you would have my great sympathies with that. However, it's interesting that allergies to foodstuffs and in the GI tract is also telling us something immunologically about what's going on. So again, there is actually a close interaction between the bowel, the immune system, and not least, the joints. And you probably will be familiar with the concept of the microbiome. So when we look at if we were, if we were to chop me up into little pieces, and extract all of the DNA in my body, probably a minority of the DNA would be from me, and the mind and the majority of the diverse types of DNA will come from different species, particularly bacteria. What we're learning in the last recent years, is that the actual bowel has got its own bacterial coating. And that can impact a lot on our health, or on disease. Also, in our mouth, in all sorts of other places. The actual normal bacteria, we call it the normal flora, are actually really important for health. That's one of the reasons that we find that in more recent years where children don't tend to play outside so much, where everything's very sterile, people don't get exposed to a whole variety of microorganisms. The rate of some autoimmune diseases has actually gone up. So I think it's very important to have a concept of good bacteria, as opposed to bad bacteria. And when people have got a food allergy, and that's going to do a number of things, not least alter the bacteria in the bow. So one of the tricks I think, will be to try and find alternative foods that are tolerated, that are still very nutritious, but don't actually cause that and can be beneficial. So you've got my sympathy, if you have a food allergy, and it's making your life a little bit miserable.

Steven Bruce

What about b 12? What's the role of B 12. In autoimmune problem,

Robert Moots

I tend not to think much about b 12. In autoimmune problems, I can see it as a as a component of an autoimmune response that actually prevents absorption of vitamin B 12. But to me, b 12, is much more relevant with regards to synthesis of blood. So autoimmune problems can minimise the absorption of B 12. And therefore people may need to have a vision of V 12. injection every few months. But I don't see that this quite the same link of vitamin B 12 in the immune system in the opposite direction, as for example, vitamin D in the immune system,

Steven Bruce

whereby combretum and D I'm not happy to ask if you've got recommendations for a daily dose of vitamin D, but more specifically than mine, don't eat too much and yours don't eat bucketloads.

Robert Moots

I wouldn't like to sort of comment directly on that is I wouldn't like to give you kind of a top of my head. recommendations. I think I forget what the units or micrograms or milligrammes I think my wife gives me about 1000 of something. But exactly what the units are very important. So you can go into your local chemist, and just tap pyre, you know, a box of vitamin D supplements, it will come in two or three different strengths. I think all of those will be pretty safe to take. But I would recommend that you check upon that and don't totally overdose yourself. And I would feel really guilty if I caused you problems.

Steven Bruce

Yeah, well, I would say if you really want to know something about safe levels of dosing vitamin D, then look at the broadcast with the Simon Billings. I think it's about vitamin D deficiency. I can't remember the title now, but there's a lot of detailed information in that one. Lisa says that she has a patient who has ankylosing spondylitis, rheumatoid arthritis and ulcerative colitis. And she wondered how rare or not this was in light of you seeing that one can lead to another.

Robert Moots

The combination of those three problems would be excessively rare. I would even contend that perhaps at least one of those diagnoses possibly may not be correct. Certainly, ulcerative colitis, inflammatory bowel disease is highly correlated with conditions such as ankylosing spondylitis. So that is no surprise whatsoever. But immunologically, those diseases are very different to rheumatoid arthritis. So what may be the case is that somebody has what we call sera negative inflammatory arthritis. Because there are forms of, for example, psoriatic arthritis, b 27. Related arthritis, but clinically looks like rheumatoid arthritis. So you know, you wouldn't necessarily tell because it looks the same, but it would be a different disease. So if you do have all of those three diseases, and you'd be extremely unlucky, but if the diagnoses were challenged a little bit, it may be that there's only two of them or not the three.

Steven Bruce

Okay, so encouraging them for that particular patient. We're going to come on to ankylosing spondylitis in a minute, or Ankylosing spondyloarthropathy, or whatever we're going to call it. But just before we do that, I'm dragging you back again to neutrophils. Matthews asked whether they're involved in inflammatory bowel disease and hence Is there a link between inflammatory diseases and rheumatoid arthritis? In other words, is there a strong link between angry goats and angry backs etc. I liked where you put that I liked where you put that method?

Robert Moots

Yes, I like that too. And the short answer is yes, we do know that in some forms of inflammatory arthritis is much more prevalent in people with inflammatory bowel disease. And we don't know whether that's caused by neutrophils themselves, or whether the fact that inflammation in the bowel allows various bacteria to get inside the body in an abnormal way and actually stimulate an abnormal immune response. It tends not to be the case for rheumatoid arthritis being related to that. But for a Syrah negative that means rheumatoid factor negative arthritis. For example, and close spondylitis, psoriatic arthritis, all of those things that tend to fit with HLA b 27.

Steven Bruce

Okay, and then hopefully for a little while anyway, the final question on RA, and you might actually have answered this one earlier. I'm sorry, if I'm asking you to repeat. Dawn's asked why whether we understand why one person might develop auto and auto antibodies against their own copy cells, while another person might develop antibodies against the thyroid and get house removed. For example, is it a mix of environment and genetics, so difficult to predict?

Robert Moots

Well, I think dawn, the person that could answer that will get a Nobel Prize, because that's one of the key unanswered questions that we have at the moment is very exciting that we've made big advances. But once you make a big advance, in one way, it actually uncovers another question. And another way. And lots of these questions are very tantalising, because it's clearly going to be telling us something if we can answer it. But many of those we haven't actually answered yet. So that's a good example, Dawn of why we actually see these kind of things. But we can't honestly explain that we can concoct potential hypotheses. But the truth is that we don't know.

Steven Bruce

Anyone a lot of prizes and awards as the Nobel on your target list. It's not even in my dreams of the phrase. Okay, so ankylosing spondylitis. Pip says, Is there any particular statistic for how many people with ALS are HLA b 27. Positive? She has three direct family members, you all have a yes, and the positive or the negative. And she has been referred to rheumatology for possible as well. And she's also be 27 negative?

Robert Moots

Well, I think that's a very interesting family. Because there are HLA b 27, I can't quote the precise figures, I would just be guessing at it, but you're looking at maybe about 15% of the UK population would have actually be 27. But the actual incidence and prevalence of ankylosing spondylitis is far lower than that. So just having the gene doesn't actually mean you're going to get the disease. And conversely, if you don't have the gene, it's actually very unusual rare to actually have ankylosing spondylitis. So that's a little bit of a paradox. What that suggesting your family whether three family members, if they've got definite clear disease, with either MRI, or radiological evidence of say, sacroiliac joint involvement, that would be telling us that there's a different gene that's involved in that particular family. And certainly, people used to think that in Africa, various parts and Sub Saharan Africa, were actually b 27, was pretty well unheard of. They would never get ankylosing spondylitis. But the truth is, you can do maybe not quite as prevalent. So there is the possibility, rarely, but definitely as you found it, of having HIV 27. If you're having as if you're actually a B, 27, negative. And again, just like as when the 27 positive, that tends to run in families. And what I always like to do is to advise if somebody has what could be inflammatory back pain, so that would be lower back early morning stiffness, ask about other members of the family with back problems that I'm sure would be a knee jerk response for you. But it can be very illuminating. Because you often find whole members of the family, more likely men than women. But these days we're finding as is far more prevalent in women than we previously thought it just manifests slightly differently with slightly different payments, deafness, it's not as common as in the end, but it's more common than initially thought.

Steven Bruce

Is there any relationship between positive or negative HLA b 27, then the severity of the disease?

Robert Moots

No, it's not in the same way as rheumatoid factor the antibody in rheumatoid arthritis that does correlate with severity of disease. b 27. Positivity or negativity doesn't tend to correlate so much with regards to severity of as,

Steven Bruce

okay. Lucy's asked about whether there are any new approaches to diagnose or treat ankylosing spondylitis?

Robert Moots

Well, Lucy the been lots of revolutions in treatment over the years. Funnily enough, many years ago, one of the big revolutions was understanding about the role of physical therapy, exercise, and moving joints and backs around because once we realise that if you don't move the back, it gets stiff and then doesn't move at all. Whereas if people have regular exercise puts the back through a whole range of different movements, that minimises the actual impact of progression of the disease. So the first revolution was just understanding, keep people moving, keep them exercising, and bully them in a nice way to keep those backs moving. I think the second revolution was understanding more about non steroidal anti inflammatory drugs. Because these can be very good painkillers. They're not really anti inflammatory drugs, the more kind of painkillers that are useful for musculoskeletal pain. But these can actually revolutionise the management of ALS, and particularly the coxes. And one of the drugs that I find the most useful is a Tory, coxhead or arcoxia. Many patients find that that can work when other end sets don't. And funnily enough, when we look at the other coxsone, Sally Cox said, there are actually some studies to show that good doses long term of celecoxib can minimise progression of disease. And that's again, very tantalising because other drugs tend not to do that. And then, finally, Stephen, the new generation of biologic drugs, these are the targeted drugs. In rheumatology, we've stolen drugs invented to treat one disease, and we've used them to treat a totally different disease, we've not really know why we're doing it, just it seemed to work. We're cheap and cheerful. We're always cheerful, because we have chronic diseases, but we used to be always cheap. But then the final revolution, as I said, was the development of very expensive targeted drugs. And those have come about because we've understood the science underlying the disease, we've understood about the inflammation pathways, and that's led to the development of drugs that will target the inflammation in very specific ways. And we now have a variety of different targeted therapies, we have the TNF alpha inhibitors like Humira, and brille, all those sorts of things. We have other drugs that target a different cytokine, or inflammation, chemical, the IR 17 inhibitors, and these are things like second kinam AB, which are very, very effective in many people. And then whilst those two types of drugs are proteins, they tend to be antibodies, so we can't eat them, we have to inject them. The third type of drug, or what we call the jak inhibitors, or Janus kinase inhibitors, and these are things like tofacitinib, baricitinib, and all those things, which are small molecules, therefore, you can take them as tablets, rather than injecting them. So over the years, each one of those three broad changes have really made a big impact on patients. Because at the end of the day, with a s, it's typically 12 years before patients get a diagnosis for the onset of symptoms, so long time.

Steven Bruce

And so what then in terms of overall prognosis has changed, they get diagnosed earlier, they're getting new biogenetic drugs and so on, what's changing for their quality of life,

Robert Moots

quality of life has transformed. And that's for a whole variety of ways. It's increased function, it's reduced pain, and it's improved kind of feeling of Pap, and activity, and, and awareness. And it's not just those kind of patient reported outcome measures that we see change. We even see people, typically an older man with ankylosing spondylitis would have a very hunched spine that was kind of fixed like that, you would expect there to be no chance of any improvement. But a small number of those people on a targeted therapy with a TNF blocker, can actually straighten up. And it's really marvellous to be able to see the impact that those have on people's ability just to lead more normal lives.

Steven Bruce

And those drugs carry with them any or many adverse effects.

Robert Moots

Well, we used to be very scared. I've been using TNF blockers in my patients for the last 25 years or so, since I was at primary school. And one of the big things about these drugs, they're called tumour necrosis factor inhibitors for a good reason. And that the chemical, TNF will actually spontaneously kill cancer cells in a test tube. So therefore, if you're going to chronically inhibit this chemical, which we know in the test, you can kill cancer cells with worried that it's going to make people more susceptible to developing cancers. And also because that chemicals important in defence against infection with worried that they're actually going to just cause loaded infection. So when these drugs first came out, I thought they were just going to be too toxic. I couldn't have been more wrong. Because over the last 25 years, we've shown very clearly both in clinical trials and also real life registries that although the TNF blockers increased risk of infection. It's easy to detect, easy to treat. And it's not the worry that we thought. And there's absolutely no risk that we can see of actually increasing risk of cancers. so strangely enough, these drugs were were inhibiting important chemicals through inflammation, the long term outlook, the long term impact with regards to side effects is far, far better than we ever actually predicted. So don't take any tips from me for the future because I would have got it totally wrong for the TNF blockers.

Steven Bruce

In terms of diagnosis, rob the the NHS changed its guidelines some time ago, didn't it? And it now has the nice guidelines are that if you had back but you're under, if I back pain, since you're under 45, and it's gone on for longer than three months, then if you've got three or more of the symptoms on the list, more than signs on the list, then you should be referred to a rheumatologist for assessment for ankylosing spondylitis. Now, and I'm not going to read out the the list of symptoms, but you can find them and it's interesting because there's a letter which has been produced by the National Association for Ankylosing spondyloarthropathy, I think is the is the full name, the NA S has been a letter produced by them, which is signed off by the rcgp, the Chartered Society of physiotherapists, the Royal College of chiropractors and the Institute of osteopathy. But it caused me a little bit of concern when we interviewed somebody about this because they give a template letter which we could send to our GPS, if we have somebody who's we think might have ALS. And they say that the nice guidelines say that because we've ticked all these boxes, we should refer to rheumatology. But when I went through the list on the template letter, it differs from the nice

guidelines now. I'm perhaps I'm just being pedantic and picky. Why would I ever, but I'm just I'm just thinking, if a GP spotted this and thought we were trying to farm somebody through for expensive tests, on the basis of evidence, which wasn't made aware of made available to nice, would we be in trouble for that? Or is it just as the best thing is just get as many people through for assessment as possible.

Robert Moots

I think the key thing here, Stephen is to use a bit of clinical acumen. And I think that's where, if you're trained appropriately, if you've got the right level of experience, if you talk to and listen to your patients, as I'm sure you do, not just going to be taking things off, but have a little bit of clinical acumen with regards to how you'd interpret that. And it's always a difficult thing with these algorithms for referral. Because usually the algorithms, I think, to work best require a little bit of clinical knoise. And critical thought. So if you use that, then you won't be sending so many people unnecessarily, I think we have to, we have to accept that sometimes you have to kiss a few frogs before you find a princess. And that's not necessarily a bad thing. Because I would rather see somebody and rule out the diagnosis, rather than have somebody walking around and never get diagnosed, because people don't think about it. So you guys are in a great position to be seeing people thinking critically, and actually filtering them through. So that's a really crucial role, I think.

Steven Bruce

Well, I suppose actually, that was probably the main point of my very long winded question there. It was just, I don't want my profession. And I'm sure that the same goes for chiropractors and physios. We don't want anyone to hold our professionals to account because we've misquoted the nice guidelines or something like that. But if you are if you are interested if you go to the National Association for including spondyloarthropathy website, na s and you go to the professional tab on their menu, you can find the template letter which you can download and it comes with all these badges at the bottom to impress your GP and it's and you can tick the boxes to say this is why I'm referring the patient, which means I have a much better chance of reaching someone like you. So good. I'm glad I'm glad we cleared that one up. All right. Pierre has asked another question a very broad one he tells me and maybe opening Pandora's Box appear I know you well, not you surely he says appear is actually a physiotherapist and he says that as non rheumatoid disease experts have you any advice for us to identify and therefore orientate patients to the right service. He is particularly where conditions like scleroderma, vasculitis and juvenile conditions.

Robert Moots

Absolutely. Pierre, I think you can play a huge role in this because you will not just be focused exclusively on the musculoskeletal system, but you can pick up other signals, other symptoms and try and look at the whole person rather than just focusing on a gambini or a gammy shoulder or whatever. So certainly there are some signs which are earlier about the photo sensitive skin rash in lupus, that can be easily detectable, particularly if you're seeing a patient on a sunny day. I think there are also things such as the very tight hard skin that people with systemic sclerosis scleroderma get. So again, when you're examining patients, you'll be looking not only at the points or joint that that's playing up, but have a wide angle lens and just look at the whole patient, maybe not so much in huge great detail. But if he can pick up these little teasers, these little physical signs, then I find that physiotherapists have extremely good at thinking about all of these things. And of course, within the context of our service, we have extended scope physiotherapists, who are effectively replacing primary care doctors in many ways with regards to musculoskeletal problems.

They spend time in our department seeing other types of Rheumatology problems, and we will get referrals from them for a whole range of diseases. And that's something that I think we should really welcome.

Steven Bruce

I'm gonna be very rude. Well, could you possibly run through that again? Because the stream I'm told froze at that point. Rebecca? Thanks, Sofia has question which is about advice for us and identifying and orientating patients down if we just hang on for a second the stream the stream, I'm told is still frozen. I don't know why. Justin, can you tell me anything? Scary now from what I can see. So I'm looking into it. Okay. Okay, well, I mean, if the stream has frozen, then people will be able to pick it up on either the transcript or the recording. So let's, let's leave that for the moment, I think I'm keeping I'm still being told that the stream is frozen, so I'm going to shut up just for a second.

Robert Moots

It's usually the lens of the camera that breaks when I'm in the frame. But I'm not actually knowingly caused a frozen stream before.

Steven Bruce

I'm not actually sure who is telling me the stream is frozen, so it may just be for them. So Justin says that we're still streaming?

Robert Moots

Well, I think either way, Pierre, have a wide angle lens, look at the whole person, think about all the other things that might be going on. And please be very forward in suggesting things that might be going on alerting the relevant medical staff. And early diagnosis can be a very important benefit to the patients that you've seen.

Steven Bruce

Just there's another one I hear from Pierre as well, but it's connected to a further question. Nicholas has asked whether you are based up there in Liverpool, because there is statistically The area has more patients for you to study for your team. The average percentage, a greater than average percentage in the rest of the country, maybe even Western Europe. And do conditions affect are your autoimmune conditions affected by atmospheric changes? Sorry, I was trying to make sense of the question which is

Robert Moots

so it's, it's interesting. I don't know if you've heard Stephen from your patients. But all patients seem to seem to actually report that their arthritis is worse when it's cold, or when it's raining. And you can almost imagine human barometers that by how the joints feel you can tell what the what the weather is going to be like. And so many patients say that funnily enough, studies have been done. correlating patient's symptoms with barometric pressure, and with rainfall. And crazily, there's no correlation whatsoever. So something perhaps we're asking the wrong question scientifically. Because so many people will report things are worse in the bad weather. On the other hand, everything's worse when it's raining, isn't it? I mean, certainly in the northwest, we have, you know, a fair share of rain. Although strangely enough, the prevalence of rheumatoid arthritis is not particularly higher than in other places. People do say that some autoimmune diseases are a

disease of relative poverty. And certainly, funnily enough, in the northwest, you get some of the richest postcodes in the country, but many more of the most kind of humble or less well funded postcodes in the country. And certainly disease is far more worse there. And it's very interesting the concept of health and inequality. That's something that some the research agenda in many places with that. But I don't know I ended up in the northwest To be honest, I'm happy to be here. It's good to be in the Northwest. Patients certainly need me so at least I feel useful. But whether or not it's because there's an excess of the patients I particularly have an interest in diseases. I can't really pretend That?

Steven Bruce

Well, that other question I mentioned was actually about EU law, which I forgot to mention in the introduction that the centre you've set up in Liverpool is a US EU law Centre of Excellence for rheumatology, isn't it? And if I can, I'm gonna have a stab at this is European lead agency for rheumatology is that the acronym is recently changed its name, it used to be called the European league against rheumatism. And now it's changed to European rheumatology associations or something, the bottom line is, is to do with rheumatology

Robert Moots

joint problems, and this European body. And every now and then they they badge various centres to be so call centres of excellence. And it just shows you can fool some of the people some of the time.

Steven Bruce

Well, pssc has been looking at you long courses on rheumatic diseases to develop his own knowledge. And do you have any views on the courses and what might be useful? So I I'm not sure where you're based here, based

Robert Moots

anywhere in the Midlands, and the Midlands. So yeah, there are two things you are set up a few years ago, some very good educational, and diverse and things. And they do a variety of courses of variety of trading things. However, also, I would very strongly recommend the British society of Rheumatology courses, or BSR runs a whole variety of courses, the highly rated extremely relevant, practical and accessible, and I would see the quality of the BSR courses, at least as good as the EU law courses, in some cases better. So you've got a nice broad choice really, a British led course, a European led course. Either way, these are all things which are great because they should be run in an accessible way and interesting way. And we can all learn a lot from all of that.

Steven Bruce

I love this. We're asking a Frenchman to choose between a European course and a British course. Fantastic. Pierre, I look forward to hearing which channel you went down. Emma's got a problem with a patient Emma says that she has a patient who she thinks possibly has as ankylosing spondylitis, but she can't get a rheumatologist referral. The patient's been diagnosed with fibromyalgia which is managed by GPS in the area, any hints as to how to get a referral, she's on several major painkillers, but still in pain.

Robert Moots

I'm very disappointed to hear that you've got this situation with your patient, because patients have a right to be seen by an appropriate health care professional. So if they're not being seen by rheumatologist, then the number of possible cons, you know, possible underlying reasons clearly, I don't have a situation so I couldn't comment. And they I would hope it's not that the GP feels that they know best and wouldn't want to get any help. I would also hope that it's not the patient has perhaps misunderstood the explanation from the GP about what is wrong with them. I mean, Fibromyalgia syndrome is a very challenging disease to manage. That doesn't involve inflammation. So as you can imagine that not perhaps one of the best people at managing that although I have to say I find myself on a Royal College of Physicians Working Party on FM, so I seem to get everywhere really. I just need to learn how to say no, Steven. But the difficulty is that Fibromyalgia syndrome is very, very different. As you know, from ankylosing spondylitis, it doesn't cost much to do a simple X ray of the pelvis or sacroiliac joints. And in most patients that would show up something the GP could do that they don't necessarily need to see rheumatologist. But as you probably know, that there's a concept now of non radiographic as So in other words, it's active inflammatory disease. But because the X ray changes happen late, it's now diagnosed on MRI scans. And in some situations, MRI scans of sacroiliac joints in the spine could only be done within the context of secondary care, not primary care. So the first thing would be to try and persuade the GP to do a couple of simple little tests. If they're positive, the GP will be a little sheepish, because clearly there's something going on. If the negative then that shows is less likely that there is a problem not impossible. Again, it could be that the GP the patient may want to change TPS, because again, either they're not being referred appropriately or the GP is not able to explain clearly in an accessible way, what's going on, and why it may be isn't ankylosing spondylitis

Steven Bruce

right. Thank you. Just on that subject, you might or might have actually covered this enough in a previous section. But I'd recommend looking at that na s website for the format letter, which gives the night what it says other nice guidelines. I mean, if you sent a letter to the GP which said, these are the nice guidelines, I've ticked them off. And it also refers to the speed tool. And Matthew, I know you said I was talking about the speed tool I wasn't ever separate. But it's also there's a reference to it on that letter, you can tick the boxes on the speed to which is all giving evidence and applying a little bit of pressure to the GP to get that evaluation done. Can you tell us a bit more about the speed to rub?

Robert Moots

Not terribly familiar with that, actually, that's not the sort of thing that we tend to be using on a day to day basis. So I'd be keen to hear you, Stephen about that you can educate me.

Steven Bruce

Well, I haven't used it. But when I looked at it on the on the near NHS website, it was seemed to be a number of tech check checkboxes, and if you ticked enough of them, it would give you a score and tell you whether you were likely to be suffering from a an arthritic disease. So yeah, I will say that a copy of that letter or a link to the copy of that letter after the broadcast. Well, we kept off rheumatoid factor for a little while and RA, but Amelia says what's classed as high rheumatoid factor?

Robert Moots

Amelia, how long is the ball of string? It's To me, it's something that would either be positive or negative. There are different units in different labs. So different labs around the country would report that in a different way. Certainly, whatever the reference ranges of your lab, the higher it is, the more likely but not inevitable that it will be significant. But in some ways, if that doesn't really fit with the patient's symptoms, and also with other blood tests, which I find more useful, such as the CRP and DSR that and measuring inflammation. If a CRP a DSR a normal, and if a patient's not got inflammatory type symptoms, then I wouldn't be worried about it. Similarly, if some of these negative rheumatoid factor, but they've got inflammation in the blood, they've got sign of itis, early morning joint stiffness, then, irrespective of the rheumatoid factor, it's going to be important to get those people assessed. So don't worry too much about the absolute level. Although the higher the level is slightly more likely that there's something that's that's going on, but not necessarily inevitable.

Steven Bruce

Thank you. Commander has asked again about ra is he writes in saying that ra afflictions are affecting the Asian population far more now than 20 years ago, you hardly heard of it in Asians, but now it seems far more prevalent, even in young Asians. Why is it becoming more prevalent? If that's the case? Could it be low vitamin D, or inflammatory triggers or other factors?

Robert Moots

That's a good question within that, not only in South Asian people, but in people from other countries that are kind of developing. I go across to East Africa a lot for a variety of reasons. But it used to be that rheumatoid arthritis was so rare in East Africa, that if you saw anybody with it, it would be a case report. But now there are rheumatologists around that region, we find the prevalence of rheumatoid arthritis is a little bit lower, but not far off what it is in the UK. And certainly Some of it may be just a lack of visibility of this, and healthcare facilities able to diagnose it. I've been going to India also for many years and helping out with rheumatology and other things over there. And it's clearly to me a lot of rheumatoid arthritis there. So, whether or not it was not really quite as visible because other diseases had all of the attention, I think certainly could be the case, but also we tend to find that rheumatoid arthritis is a disease of industrialised countries. So for example, in rural Kenya, there was not much rheumatoid around until there started to be urbanisation. And then there was more of it. So whether or not that urbanisation tends to cause you know, relate to smoking, or the some other environmental factor that but I think eventually you've made a good observation that perhaps this wasn't a big issue in the past, but certainly is an issue now. Exactly how I suggested a couple of things but the truth is, we don't really necessarily know

Steven Bruce

some more questions about diet for you. I don't know who's asked this one but they put in some long words for me to tangle with. Have you reviewed research on mica therapy? adaptogens are such as the answer inflammatory Ganoderma, lucidum, Ganoderma lucidum or Reishi? fungus?

Robert Moots

Short answer. Now, there's many different types of dietary manipulation, some tend to become very popular at some stage and then fade and wane away. Others tend to become more popular Other times, so I don't keep track of all of the various things. And I'm not aware of that I do apologise that contact that

Steven Bruce

any information for Lauren's on probiotics,

Robert Moots

probiotics, I think the things that would relate to what I was saying earlier about the microbiome. So what you're doing is trying to influence the bacterial floor of the bowel in a way that can be beneficial to the immune system, there is no doubt that that can be helpful. The trouble is, we don't really know exactly what the beneficial thing is. And it's really scary, because there's lots of research now, that's going on looking at the concept of faecal transplant, which, after dinner is not maybe something we need to go into any huge, great detail. But it does involve having, thankfully in a tablet form some of the kind of faecal bacterial material that might actually help grow and develop beneficial bacteria, whatever they may be. I think that this is something that in the future, we'll be hearing more about, and perhaps do it in a little more targeted and perhaps pleasanter way.

Steven Bruce

It's a curious thing, isn't it? I've always wondered why my dogs are prepared to eat other animals poop. And I haven't researched it in any great depth. But I do remember reading something by somebody based on no research whatsoever, which he was they were trying to supplement things and I don't know which things vitamins, minerals, and whatever that their body knew it was deficient in. So maybe they're ahead of the game there.

Robert Moots

Well, I've got two dogs, there, Hungarian visualise or Velcro dogs as people often. And what I can really not understand is how dogs can have such a sophisticated sense of smell, that these days they can smell COVID in an airport, you know waiting queue, but still will eat the most revolting things. It's just I can't understand that my daughter's event so I should probably be asking her.

Steven Bruce

Well, Pepsi just sent in an observation, her husband has apparently been on Humira for his psoriasis. And she says it was amazing. He's been off it for the last four years or so and hasn't really had any major returns to how he was just small bits here and there. She says it's brilliant.

Robert Moots

That economists. Yeah, that's such good news. Because what we really want to do for these autoimmune diseases is to cure them. What we do normally is to control them. So a little bit like diabetes, if you have type one diabetes, you take insulin, you live a normal life with the insulin, but stop the insulin, the disease comes back. So similar in autoimmune diseases, when we actually treat with any kind of disease modifying drug, even methotrexate, they can often control the disease. But when you stop, the disease flares up. However, in a small but significant proportion of people stopping the drug means the disease doesn't come back. And I just wish that happened more often. So I think her husband is in a really nice position that he's had a drug, it's worked well, he's well, without the drug. And I guess where it's at other flare up again, he could go back on a drug that he knows has worked, and it should work again.

Steven Bruce

Lawrence obviously has a particular interest in probiotics. He says that the APC department of euicc here in Cork, he says, has developed a probiotic called bifidus, infantis 356 to four nice name, which trips off the tongue, which is apparently effective in helping IBS conditions. That's great. Does he

have shares in that? I don't know. I don't know. Tell you what, though. Can I drag you back to vasculitis? while we still got a few minutes left? Because what we haven't talked about is probably my LG rheumatic app. And you probably know a hell of a lot about that. And yet, I know that in many cases, it's quite hard to recognise sufficiently early in patients, what should we be looking for?

Robert Moots

So I'm really glad that you asked that because that's something where it can present to a whole diverse group of clinicians and people tend to present with what's often mistaken to be joint problems, and issues lingered or problems around the shoulders around the pelvis. And what I like to ask these patients is three things. Number one, what's it like getting out of the chair or getting out of the car? Number two, what's it like lifting heavy things down from above your head? And then the third thing, which is actually very discriminating, I find, can you roll over in bed without having any problems? So obviously, there are many drawing problems that would cause If not all of those things, but you'll all be able to examine joints, new bell to see whether there's actually a pathological functioning joint, if you examine the joint, and that actually looks okay, but the patients who've got those symptoms, then I really think as long as the patient so we're 55 years old, because we weren't diagnosed it younger than that. It merits a check it with a GP and a blood test for CRP a DSR. If it's polymyalgia, it's curable. It just needs a course of steroids. six to nine months patients cured stop the drug, and it doesn't come back. Otherwise, it can be months, years of agony.

Steven Bruce

Absolutely. You made a very rigid cutoff point 55 years of age, I mean, is it the new incidence of it below that age?

Robert Moots

We would also we would tend not to diagnose it. And in fact, the various international guidelines for diagnostic criteria would require the age greater than that. Now, I think for me, one of the key questions is Why? What magically happens, what will happen to me when I ultimately get to the age of 55? If I ever managed to get that way? Why will I get the chance of having polymyalgia? Whereas if I'm younger, I won't? And the answer is we don't know. However, what we do know is that the immune system changes with age, it doesn't mean to say it's not working. But the way that it works can actually change with age. And that's one of the reasons that we tend to grow out of hay fever in many cases. And that could be one of the things that's telling us why polymyalgia is only diagnosed and people over a certain age.

Steven Bruce

Okay, I've been asked to ask you, obviously, I know the answer to this question. What is DSR? Yes, stop? Well, I'm really sorry. I didn't take DSR No. Yes. Oh, yes. Sorry. In which case we I think we know. Right? Yes, yes. I'm sorry, I wasn't there. It's my, my kind of scouse accent not always an interesting question, which is, again, anonymous. Do you ever see things, from referrals in referrals from people like us, the physical therapy professionals, where we've got it badly wrong, or badly wrong, but we get it wrong?

Robert Moots

Absolutely. But then so I do from other consultants, from general practitioners for many body. So what I don't find is that referrals that have been triggered by you guys are any worse than referrals that are triggered by other places. In fact, I tend to find that you guys probably are a bit more

bothered about trying to get it right. So I find it's actually a higher chance of being right, compared with many general practitioners that, you know, for them, it's no big deal to be referring things on. So I think you can be congratulated as a group that at least in our practice, we tend to see a higher chance of appropriate good and relevant referrals. But don't let that go to your head.

Steven Bruce

Interestingly, Carrie has come in and said that she's given to understand that it's very hard to get GPS to take an eye the idea of PMR seriously, is that your experience? And if so what's your advice to us?

Robert Moots

If that's the case, that would be quite sad, because it's a fairly prevalent disease. And it's very prevalent in primary care. And it's the sort of thing that we'd like GPS to be trained to diagnose it in the sleep now, hopefully, there'll be awake, but it should be very straightforward thing. And if, if I was having that sort of experience with with a GP, then, then that's sad, really, because it's an easy diagnose to treat. Disease is an easy disease to diagnose. It's just a matter of thinking about it. Because if you think about it, who doesn't get pains in the shoulders when they get beyond a certain age? Mostly, that's going to be due to wear and tear degenerative problems. But it doesn't take more than a couple of quick questions, to screen out other potential things. And I think it's a shame when people don't think that little bit of a wider context, a little bit of a wider angle lens. And if the GPS just got about five minutes for a consultation, that's four minutes longer than you need to diagnose polymyalgia if you think about it,

Steven Bruce

okay. A couple of questions about drugs have come in Lucy's asked why her as patient has been given gabapentin and it hasn't helped apparently.

Robert Moots

Well, Lucy, I'd struggle to think of why myself. To be honest, gabapentin is a very useful drug for pain modification in a variety of conditions. Obviously, it's the kind of drug that we use in my practice. Like Fibromyalgia syndrome, and other things where there's something abnormal with regards to nerve transmission of pain, where you're actually brains receiving pain signals when it should really be receiving touch or pressure signals. So some diseases, this can be great for ankylosing spondylitis per se, that would not be the type of drug that I would tend to think of as being terribly useful because there are clear mechanical inflammatory problems there. So unless the patient's also got something like Fibromyalgia syndrome, or something on top of that, there are other drugs, and NSAIDs, potentially sulfasalazine. If it's peripheral disease, a TNF blocker, or a targeted drug, if it's very severe disease, but gabapentin would not be at the top of my list for useful drugs, not impossible, but it wouldn't be top of my list.

Steven Bruce

Thank you. And the other one was from Jerome who says, she had a patient who was on methotrexate, who stopped after three after three years, and it never came back. I'm not quite sure what the it was that never came back. But

Robert Moots

but it's good news. And that's one of the things you can put people on the drug they can do well, you can monitor them for side effects, and then just forget about them. So what we always should be thinking of doing is, if a patient's Well, if the read remission, if they've been remission for whatever disease for at least a year or two, can you get away with lowering the dose or stopping it so that patients John's clearly did. And I think there could be other patients around on drugs that are maybe not doing any harm, or maybe they are a bit, but perhaps they're actually being taken unnecessarily. Most people flare with inflammatory arthritis, but enough of them won't to make it worthwhile trying. And everybody wants to try and be off drugs if they can be.

Steven Bruce

Well, we got a very few minutes left. And one thing which I know that you also deal with is trigger finger and I thought, well, let's get let's get to the peripheries a little bit and away from all these zero negatives and others. What can you tell us about treating trigger finger

Robert Moots

or trigger finger I found can be a very challenging problem. Strangely enough, the bottom line is there a variety of different conditions that can really cause that, but I break them down into effectively two different types of inflammatory problem, such as rheumatoid arthritis where people get nodules around the flexor tendons that can just get stuck, or degenerative problems, where degenerative tendon sheath can actually cause triggering. Now, strangely, I don't see very much of that. Maybe I don't ask about it enough. But in cases of triggering of fingers, then there are a variety of things that can be done theoretically, including getting physiotherapist to see and assess patient. But the bottom line is that many patients respond to a little injection of some cortisone around the tendon sheath. And that can work wonders for people. So very satisfying procedure, quite often. Triple is if you get it wrong, and put steroids in attendant, you can rupture the tendon, and that doesn't look very good in court.

Steven Bruce

I just ghost me on the spur of the moment. Is there any rule for something like shockwave therapy in treating it?

Robert Moots

Was your question I don't know. Maybe you should try. Do a little study on it. And that will save people having rotted tendons by people injecting inappropriately steroids around there. I honestly don't know. But it sounds as though it could be worth a try.

Steven Bruce

Interesting. I'll I'll speak to Tim Watson. We've got we're arranging for Tim Watson, who's the ultrasound expert electrotherapy. Experts retired now from Hartford University. But yeah, and asked me if he's got any evidence on that. And now, I have throughout my relatively short medical career, I've been calling this to patrons, disease or syndrome. And I wonder whether the rest of the world calls it do patrons? As far as I can. I can see. Is there any connection between that and trigger finger?

Robert Moots

Again, that's a tricky one, Stephen. Intuitively, it would make sense that you'd see one as the extreme end of the spectrum for another. Funnily enough, I actually hold a grant on examining what

the cause of Juba trans contractor is, and we're actually looking at potential to rather than have operations and I try and keep people away from surgeons, surgeons are good to stay away from if you can do that we're looking at the potential for injecting things around the matrons of, for example, a TNF blocker like Humira. And that's a little way down the line, but at the moment, certainly surgical treatment, it may be more medical treatment, and there are things that might make us suggest that it could be part of the same spectrum as trigger fingers. So interesting thought

Steven Bruce

Well, I'm glad you asked that question then. And I chalk another person who pronounces it the way I don't pronounce it. That's an IPA. You're French. You should tell me how do you prefer and should be pronounced? Because I'm sure it's a French word originally, Rob. It's been brilliant. And we've had loads and loads of thank yous come in, particularly when the stream froze, and they were just sending in there. Thank you for filling the time. We don't have time for an Oh, do we have time for one more? Maybe? Jennifer says, could you explain what a positive HLA b 27 test means? She is currently treating 225 26 year olds with as one very mobile but positive one who is very immobile, but negative. I kind of feel that you went through that earlier on, but perhaps

Robert Moots

I think clearly for the bottom line is that it's not necessarily meaningful at all. If you have the diagnosis, if it is as having be 27 or not, is not really going to make any big difference. So don't worry about that.

Steven Bruce

Okay, and then Mike is asked about PMR, who decides the level of steroid required the GP or a rheumatologist?

Robert Moots

Oh, I think it should be a GP, it's very straightforward. If you're not sure go to the British society of Rheumatology guidelines for treatment. Effectively, it means you start at 15 milligrammes of prednisone once a day, and then there's a little protocol to de escalate it and decrease it down to zero over about six to nine months, is very straightforward. We only see people in secondary care where the diagnosis is a little bit dodgy, or there's something else going on, it really should be treated and managed most effectively in primary care.

Steven Bruce

Brilliant robbers, takers write up the time, thank you very, very much indeed, for giving up your time on all those things. I told people that you're up to, it's amazing that you can give up 90 minutes to be with us this evening. I know you've got a case of traditional Liverpoolian, refreshment under the table ready to indulge in once we finish so we won't keep you any longer. But thanks again for your time. It's been really revealing very informative. And I know everybody's very grateful for it.

Robert Moots

Thank you, Steven. A great pleasure and I hope it's been useful to your group. It sounds really nice, engaged group really good questions, and it's been great fun.