Transcript

Axial Spondyloarthropathy With Andrew MacMillan & Alex Corser

Cast List

Steven Bruce	SB
Andrew MacMillan	AM
Alex Corser	AC

SB: Now there's nothing we like better in the Academy than busting a few myths and I've got two excellent people to do just that with me in the studio. They're both representatives of the National Axial Spondyloarthropathy society. They're both osteopaths and I'm hoping that this evening what we're going to do is we're going to learn a lot about what we've been getting wrong about ankylosing spondylitis over many years and learn a lot about how we can get things better. Let me introduce my guests.

On the one hand I have Andrew McMillan. Andrew gets my vote straight away because he's ex Royal Navy, but he's now an osteopath, has been for a while and he is the lecturer at the LSO in sports and exercise rehab. He's joined by Alex Corser. Alex, another osteopath is also a lecturer at the LSO, where she manages the clinical competence for the final year students. She also runs the Penn Clinic in Hatfield, but she's also, as I say, a representative for NASS, the National Axial Spondyloarthropathy Society and between the two of them, they lecture around the country to various groups, busting myths and helping people improve their practice.

Great to have you with us, Andrew, thank you. Alex, thank you for coming up. I should've mentioned you're also one of our members in the Academy as well.

AC: I am indeed.

SB: You can talk about how wonderful we are. Well they all know because they're members. Andrew, why do we have to talk about axial spondyloarthropathy instead of just calling it good old anky spon, as we used to?

AM: There's quite a lot that's changed in both the diagnosis and the management of the condition.

SB: Over what period of time? Are we talking very recent?

AM: Not recent at all. In fact, some of the evidence for the changes in thinking's going back 30 years. I've recently read a piece of research from 1993, but it's still going unrecognized, it's going misdiagnosed, undiagnosed. There's an average of an 8.5 year delay to diagnosis for people with this condition. It's got the potential to leave people disabled. Osteopaths will see it regularly in practice, so will chiropractors. 68% of people that are diagnosed with the disease have seen a chiropractor before diagnosis. 60% have seen an osteopath before diagnosis, and it's missed routinely in practice. This is our bread and butter of people we'll see day in day out in our clinics and it's missed-

SB: So we are not just accusing osteopaths and chiropractors of getting it wrong, are we?

AM: It's missed by many, many people.

SB: But we musculoskeletal experts are not seeing something which we ought to recognize.

AM: Absolutely. And we've got the potential to make a huge difference to people's lives. We've got the potential to save a lot of suffering and potential disability for our patients and essentially get them the care and the diagnosis they need.

SB: Why is it that stuff that was evident from research 30 years ago is still not being acted upon?

AC: I think it's still not always well taught and I think that's across the board. That's not just in manual therapy situations. I think it's still not taught to the standard it ought to be and I don't think enough attention is given to it clinically.

SB: Where would you expect this to be picked up in the conventional circuit? I mean GPs, presumably have got this somewhere in their radar? The huge number of things that they should know about.

AM: They should, that's the thing. There's an awful lot that goes with it and it is that notion that most back pain is nonspecific and if we don't know the signs and symptoms that we're looking for specifically, this jumps out at you when you know what you're looking for. But GPs, as you say, they've got other things to look for and it's not just manual therapists. GPs could be potentially making a big difference to diagnosis as well and have access to testing.

SB: So just before we get into the number of how we osteos and chiropractors sought this out ourselves, what would be the normal course for a patient in the conventional healthcare system who doesn't see one of us? What happens when they go to the GP and the GP says you've got back pain and then there's a standard protocol in NHS, isn't there, of watching and wait for X number of weeks and then do whatever. So at what stage do they currently get picked up in that process, would you think?

AM: So typically it's late, as I say. The 8.5 year delay to diagnosis across the board. Often these patients get treated as if they have nonspecific low back pain rather than a specific pathological cause. So the ideal course would be that they'd come in, tick some of the boxes that we'd look for for diagnosis and either have a blood test done for inflammatory markers and genetic markers and then a specific type of MRI that's done, referred into rheumatology and appropriately managed. And that prevents an awful lot of the spinal fusions and the actual ankylosis from occurring.

SB: Be more precise about what we've been getting wrong all these years then, if you will.

AM: It's the later diagnosis. It's the treating it as if it is normal back pain essentially. So treating it as if it's musculoskeletal rather than an inflammatory or autoimmune, autoinflammatory cause, which then changes the actual management-

SB: But we know for certain, don't know, that there's a three to one ratio of male to female.

AM: Yeah, that's a big one. That's been known for a very long time. It still taught as that.

SB: I saw in one osteopathic textbook, permitted it's a fairly old one, it was an eight to one ratio they were teaching.

AM: And that's switching now actually quite firmly the other way we're looking at, but even those myths persist as in... There's a difference between the NICE website and the clinical knowledge summaries website and the NHS direct website. So this isn't across the board, it's uniform. We know that it's a one-to-one ratio in male to female. We know that the two conditions present slightly differently, so there's slight gender differences in presentation of the condition, but there's equal amounts of non-radiographic and radiographic axial spondyloarthritis with the same disease burden. So it presents slightly differently, so it's often missed in that sense. Women tend to get later diagnosis than men. They're more likely to be misdiagnosed as well, which is a big problem of healthcare inequality. Women are more likely to be told they have fibromyalgia or some psychosocial issues or depression, even put down to gynecological causes as opposed to identifying a proper pathological cause for and getting appropriate treatment.

AC: Personally, for me, running a clinic that's been open 40 years, when I looked through patient's notes historically, we actually had one on Tuesday.

AM: I had one this morning.

AC: When we look through notes historically, I can see that this has been missed in the clinic that I'm now running and I look back and I think this person clearly had ankylosing spondylitis or similar.

AM: Had a patient that has been seeing osteopaths for probably what, 30, 40 years, that I saw and had the classic features of axial spondyloarthritis and it's been missed for a long time.

SB: So we should assume them that at least at the LSO where you two both lecture, that this is being taught properly.

AC: Yes. As of this year.

SB: Does that mean that the the University College of Osteopathy, McTimoney College of Chiropractic, the Anglo-European College, all the other colleges, is it still being taught badly?

AC: I don't know.

AM: But not teaching there, I'm not sure. Is it BCOM that Zoe's going to be doing some guest lectures at?

AC: Yeah.

AM: Zoe Clarke, who we work with, is going to be doing some at BCOM. I literally only know what I teach in my class, so my students are very well aware of these things.

SB: One of the things that is immediately evident for this is that we manual therapists, and I should include physios as well in that capacity and sports therapists too, is is that we can make a big difference if we get this right, not just to our patients but to our own reputation. All of a sudden we start identifying things that should have been picked up much earlier.

AC: I think one of the things for me as a clinician is it's young people. They're often active, and what my thinking was that it would be clear because they'd come in with an inflammatory kind of pattern. Now that only comes up if you are starting to ask them about those things, which we should be doing. But what I find is because they often rationalize things cause they've tried to explain it to themselves, so they've often said, "Oh it started after I did this or I went to this rugby match or when I lifted this furniture." And actually, now that I know a lot more about it, if you drill down into that, that isn't always the cause. It's something that they've rationalized. And if you do that inflammatory screen, actually other things come up that I don't think they would have come up in a case history for me classically.

AM: Or putting it together over a period of time. So some of the extra articular manifestations, if you know that they're connected and now to ask about those conditions, it's a huge marker towards that as a potential diagnosis. So things like the inflammatory bowel diseases, psoriasis that's linked. Uveitis is a heavy indicator, actually only in more severe. So the more severe end of ankylosing spondylitis, poor prognosis is linked to anterior uveitis and early hip involvement. But if you typically have someone that's got uveitis and a a bit of a dodgy hip, say, that we're accessing, you need to then be asking about the enthesopathies, the plantar fascitises, the other factors that goes strongly to support a diagnosis of axial spondyloarthropathy to link it, and these may present quite far apart. It might be you saw the person for lower back pain three years ago. Then they've come in with some costochondritis and then they've popped back in this time for a sore knee and it's linking those things and essentially auditing it.

When we've looked back on patient notes, things jump out at you as quite clear, but on each individual presentation you might not necessarily get it. It's putting that whole picture together which we're very well placed to do in private practice in particular, so we've got the time to do it and we've got access to the full history.

SB: Can I get a bit personal with you? You have ankylosing spondylitis.

AM: Yes.

SB: Could you tell us about your personal history about how it manifested itself and how you then found your diagnosis?

AM: This is part of why I'm so passionate about it to teach it and teach it properly. And it also goes to show that I've been.... I know plenty of other osteopaths, they've also had a diagnosis after qualification. I went all the way through a fairly vigorous five years of education in osteopathy. I've been manipulated more than once. I've had people assess my body several times and no one suggested it as a diagnosis in the past. That kind of goes to my thoughts as to why we can do better with it. I've had episodic back pain essentially since I was an early teenager.

SB: Would that be typical?

AM: Yeah. So we think from looking retrospectively at radiographic change, it can start as young as eight years old. So by the time you have bony change, it's too late. By the time we're looking at the things that are traditionally taught, like this poker back, rigid posture with a positive shoulders test, that's end stage disease, that's like it's been missed for 20 years by that point. Early stage we can detect. So with me, typical presentation within teens, alleviated by exercise aggravated by rest. I've always been very active, very sporty, and the classic things people say-

SB: Apart from that time in the Navy, which we know is a very lazy time.

AM: Yeah, absolutely. You just sit around eating and not doing an awful lot. There's gyms on board. Hard to run, but easy to lift a bit of weights.

SB: Okay, so you were very active. Presumably the symptoms didn't manifest themselves as much as they might in other people?

AM: I managed through exercise and I would always say the traditional things patients would say like, "Oh my back's really stiff if I don't go to the gym or I'll go for a run and it really helps." I've done as you say at that time when I was through basic training, putting on my heavy boots and going for a run because that's the only thing that stopped what I now know sacroiliitis, but I used to, "My back really hurts. If I stamp and run up hills, it stops hurting." And it's that sort of thing, as the inflammation is pumped out or I'd put injuries down to a rough job. Been to the gym, into martial arts, so, "Oh yeah, my knees hurt because I've squatted too much. That's why my knees hurt. Or I've been running a lot in boots. That's why my feet hurt." And then actually it's an inflammatory flare.

SB: This is probably getting ahead of ourselves here, but if you had been diagnosed earlier on, in your late teens or early into your Navy career or whatever, would it actually influence the outcome of the disease?

AM: Absolutely. I'm now disabled, so I have stenosis. Just being a bit personal. I often lose power in my legs, get claudication, and have some quite nasty health effects of it. I've had to change how I work, stopped working with patients as much and take quite a lot of time off through it. We know that anti TNF drugs can slow the progression by about 80%.

SB: Which drug, sorry?

AM: Anti TNF tumor necrosis factor. They're biologic medications. It's an injectable medication that's essentially like a DMAD, a disease modifying antirheumatic drug. They slow the progression dramatically. We think that AS progresses by about 35% every 10 years. So were I to have been medicated for it 10, 15 years ago, my disease progression wouldn't be to full on radiographic AS, which I think we'll look at in a bit. Absolutely. Were I diagnosed sooner I would have had less health complications.

SB: I seem to recall... My memory is dodgy. I didn't pay much attention at the time, but when I was in college we were simply told with what we then called AS ankylosing spondylitis as opposed to axial spondyloarthropathy as a group, exercise and vigorous physical therapy will help to manage the pain. But we weren't told about it being a factor in delay of progression.

AM: Biologics have only been widely available for 15 ish years, 10 to 15 years. And same with early detection through advances in MRI. So things have changed dramatically in the last 15, 20 years. But there's a new class of medication essentially that makes a big difference. Because it used to be nothing we can do, exercise other myths like it'll burn itself out, which is not true, but that's spinal fusion essentially. So symptoms will decrease because the spine has entirely fused so there's nothing left to fuse.

SB: Of course you're looking for a bamboo spine, it's a bit late by then.

AM: Yeah, absolutely. And that, I think, when we said about the delay to diagnosis, that is what across the board medical professionals are looking for. That's what we're taught to screen for when we look at the pictures and the textbooks. It's a hunched old man on a walking stick. But we know the average age of diagnosis is 24, yet we're looking for people hunching in like that end stage disease. So the two never quite sat right with me.

SB: Average age of diagnosis or onset?

AM: Diagnosis? Onset is early teens. Diagnosis, the average age is 24.

SB: That's earlier than I was expecting.

AM: Absolutely. And it's come down.

AC: It's a young person's disease process. We'll show you later, but even someone who's got the fusions, I still don't think it's obvious palpating it at all.

AM: I've been told by professionals in our industry that I don't have AS because they can't palpate it, which I'm sure would be news to my rheumatologist having seen my imaging of it.

SB: We don't have your images here. Can you tell us what, what would you see on your images? Sacroiliitis and?

AM: Sacroiliac's...

AC: Fused.

AM: Yeah, fused completely.

AC: I've reviewed his MRIs and the SIs and the lumbar spine are fuse, and there's some fusions in the thoracic spine and it affects your temporary mandibular joint as well.

AM: And my hip's a little bit dodgy on the right. I've got the proper, what we'd look for, bamboo spine fusions.

SB: And what will happen as a result of that now?

AM: That will progress.

AC: You've been taking anti TNF medications for...

AM: Six months.

AC: Six months. I have worked with Andrew for a long time and I'm his osteopath too, and what I would say is he couldn't walk into clinic further than his parking space outside the door and had to have a break between every patient and even then I'd find him rocking over a ball, and you needed a nap during the day and you had brain fog and you had fatigue and now he's back to-

SB: This is going way outside the parameters I would expect. Brain fog? That's something you get on chemotherapy, not on...

AC: It's an autoimmune disease.

AM: The severe inflammation, the fatigue is a big part. So most people with ankylosing spondylitis or axial spondyloarthritis have disturbed sleep. Second half of the night pain is a key feature. So I'd be surviving, when I first went on to Neproxin as opposed to just ibuprofen, it was the first time I'd slept in a four hour chunk in years. That made a big difference. Then moving onto a slightly different NSAID, I'd get six, seven hours sleep, which is amazing.

SB: Are NSAIDs still the first line of response?

AM: First line, yeah. And good response to NSAID is a heavy diagnostic criteria for inflammatory back pain. So they have to be taken at the correct dose and for a protracted period of time.

SB: But not steroids?

AM: Not particularly. Personal experience, prednisone, which I was on, was it useful for uveitis flare, but it did nothing for symptom control, so I felt the worst I felt in the years on prednisone. It can be used, it can be quite helpful but you can't really stay on them long term at the required dosage. So it'd be about 60 milligrams of prednisone is the appropriate dose for AS, which is a fair chunk, so you get a lot of side effects with that.

SB: We've got a few observations and questions coming in already. Somebody here has said that they think, Alex, what you were saying about patients rationalizing symptoms in themselves or in conjunction with Google means that we miss more and more things. The words, "I think it started off" are possibly our worst enemy in the clinic, then we start to associate things with the wrong thing. Anna Stainer says types of AS. What are the types of axial spondyloarthropathy? Are there, or is AS just another term for ankylosing spondylitis? I knew there was psoriatic arthritis, and ritis, et cetera, but these aren't really axial are they?

AM: Ritis is not a term in common use for the historical connotations of it. So that would be reactive arthritis now. They are the HLAB27 positives or-

SB: Let's just step it back there, because you've flown across the... Just tell us what reactive arthritis is, because I know we should all know, but let's pretend some of us don't, like me.

AM: Reactive arthritis, again, it's fairly misunderstood. It's an arthritis as a result of an infection. So there's typically different bacteria that will cause it. We're taught as osteopaths that that's to do with things like STIs and it's a social disease, but not always. That can also be enteropathic, so it can be due to food poisoning or having a real nasty flu or an infection.

SB: It's relatively limited in this course, isn't it?

AM: Typically. So that's again connected to HLAB27 that would typically affect joints rather than axial. So it'd be knee. Red, hot, swollen knee, can can be accompanied by arthritis and again, uveitis so that they can't see, can't pee, can't bend your knees is still what we look for for reactive arthritis in a lot of ways. But there is a genetic link to that as well to this a human leukocyte antigen B27, so in HLAB27 is linked with all of them. The AS is axial spondyloarthritis, is the umbrella term that comes across the board for that, and that's this change in the naming of it, can't remember that word, because AS is radiographic. The diagnosis of ankylosing spondylitis is radiographic change by the New York criteria, so you have to have sacroiliitis and spinal fusion. But we can detect the disease process about 15 years before radiographic change now, which is non-radiographic axial spondyloarthritis. So you have radiographic, non-radiographic.

SB: Now I was under the impression there were two different strains. They're not, it's just early stage and late stage, basically.

AM: Sort of. They're equal prevalence between the two. There's equal disease burden between the two, so you get just the same amount of symptoms, same amount of disability and dysfunction with them. It's purely a manmade construct of is there change on an x-ray or not? So it's not that AS is worse axial spondyloarthritis, it's just axial spondyloarthritis with x-ray change. Typically it would be later in the disease process, but it's not a worse version of it or a later onset version. Some people, and we still don't know why, some people fuse more and some people fuse less.

Typically men have more radiographic change than women, which is where the myth that it was a three to one ratio came from, because women were getting misdiagnosed because x-ray wasn't picking up those changes, whereas an MRI with STIR would. MRIs are a much more sensitive tool, so we pick it up a lot earlier on MRI, if it's the right type of MRI and also looking whole spine. Fusion can occur anywhere in the spine. I was taught traditionally lumbar spine stacks up like you're building building Legos on top of each other and eventually gets to the C spine. It can start anywhere. It's a systemic inflammatory condition. So it can start in the C spine or T spine.

SB: You talked about peripheral manifestations as well.

AM: Absolutely, absolutely. So you can get different types of spondyloarthritis, so you can get peripheral spondyloarthropathy that doesn't have the spinal element but just has the joint manifestations, enthesopathy is a big part. So infrapatellar or achilles can be a big sign of it, it's a pain there. Plantar fasciitis is very common with it. Costochondritis is reported very frequently as well. And then things like the uveitis, psoriasis, inflammatory bowel disease, they're all heavily linked with it.

SB: So the two questions occur to me, and I must come back to some of these in a second, isn't there a third component in the axial spondyloarthropathies along with ankylosing spondylitis and reactive arthritis? Those were the three that I think that I was asking about.

AM: Psoriatic arthritis. Psoriasis occurs in 20% of people with axial spondyloarthritis. But psoriatic arthritis is its own disease entity. They're under the same sort of umbrella. Psoriatic arthritis is clinically very difficult to differentiate. Partly the differential is on the presence of psoriatic patch, but also it's the x-ray changes themselves look different, so the bamboo in the areas that you get fusion in psoriatic arthritis is different on radiography, but that will never be a diagnostic criteria.

AC: I was going to say when were talking about all the differences between the types of arthritis, I would say that that becomes a really interesting academic subject, but clinically you can't really tell the difference. You don't need to know the difference. You just need to refer and be able to write a really good referral letter, and that's what you need to know.

AM: Pretty much. I'd agree with that completely. I couldn't clinically tell the difference without looking at imaging often, because that psoriasis is very common with it, very similar disease family, but both need to be managed by a rheumatologist, and-

SB: When you were talking about reactive arthritis, I was thinking, "Well actually a lot of this just sounds like ankylosing spondylitis again."

AM: Yeah, they're very similar family of disease.

SB: Can I turn back to a few of these observations that have come in here? That one I have just done so... I don't know who asked this, who has made this observation, but they say if you send patients off as I do to see GPs, it is regularly not acknowledged by them if they don't do the right blood test. This may be changing because osteopaths have more control over getting NHS blood tests for their patients.

AM: There's a referral template. There are two very important tools. There's a referral template by NASS allies, which is a tick box. It's got a copy of the NICE guidelines on the referral.

SB: Where is it?

AM: Yeah, Zoe-

SB: That that one there isn't it? Excuse us while we try and bring this slide up. My little tool here is not working. No worries. Let's try this other one. Let's see if we get it. Anyway, you talk about this tool and when it comes up I'll let you know.

AM: I used this today in clinic. I have a stack of them in my drawer. Like I said, this is one in 200 patients, so it's incredibly common. We see this a lot. Inflammatory back pain is present in somewhere between six and 17% of the back pain population that we see, so we will see these features. This you can do online or you can do a tick box fashion. It takes about 30 seconds to do.

SB: So we'll make this available on our website anyway. Is the SPADE tool, is that the same thing as-?

AM: SPADE tool is different. SPADE tool a clinical decision making algorithm. You input your patient's symptoms into the SPADE tool with the tick box. It's free, it's an NHS resource. It tells you the referral path you need to take with your patient. It tells you how likely the diagnosis is and supports your referral. So essentially I don't think, "Am I overreacting and seeing this because I've just watched a fantastic webinar on it? Do I think that every patient has it?" You can sense check yourself by tick the boxes for their symptoms and it pops up need to refer, don't need to refer, refer for blood, refer for imaging.

SB: But in this here, I've taken this excellent out of parts of your presentation, which everyone has available. Essentially it's a template for a letter to a GP.

AM: You send this on its own to the GP.

AC: And it's brilliantly received, because it has actually at the bottom of it, which you can't see on this, it has all of the kind of different logos for the different...

AM: Royal College of GPs, Royal College of Chiropractors, Institute of Osteopathy, Chartered Society of Physio and NASS all endorsed this.

AC: So you see here correct language for the GP and you're making the GP aware that you really know this condition.

AM: And it's got a copy of the NICE guidelines. It tells them exactly what to do, and at that point if a copy has gone to the patient, copied to the GP, it's not, "Oh, my osteopath thinks or my chiropractor thinks," this is the referral pathway they should be taking on the NICE guidelines.

SB: Are there specific guidelines, NICE guidelines for axial spondyloarthritis?

AM: Absolutely. And they're on the letter.

SB: And they're on the letter.

AM: It's a specific type of back pain as opposed to nonspecific back pain guidance. It can't be managed and treated the same. It's has to be managed and treated like a pathology because it is.

SB: It makes it sound as though were having to get grumpy with GPs to tell them what to do, but actually we can't expect them to know everything. To give them that... Here's your- to what should happen to this patient.

AM: But if they see this and you've ticked that... The patient I filled out today had six of the boxes ticked, the GP will know my logic. They're not having to read through a very long waffley letter about, "I felt that there was a slight increased tone in their QL." They're just looking, "What's the osteopath think's going on? Oh, these symptoms, what do they want me to do about it? Refer for bloods. Excellent." It's really helpful.

SB: I'm embarrassed to say that in my own clinic, we've always taken a lot of trouble over making sure that all our letters go out looking professional and written the right way, as we all do. But of course if you think about it, as we all should, we should all be thinking about this from our customer's point of view, and in this case the customer is the GP. What makes it easy for the GP is that tick box doesn't it? You mentioned the logos, and it never occurred to me in the past, but I don't know which of those logos at the bottom of the letter, whether it's the Royal College of Chiropractors or the IO or whatever else, but some of those presumably will resonate with the GPs. Which ones do you think are the most powerful?

AM: Royal College of GPs, to be fair.

AC: And I think it means that they're looking and they can see that you're speaking their language and they can just glance down. We have to remember that we have half an hour to an hour with patients depending on how you're running your list and we're still missing it. A GP has seven to 10 minutes.

SB: And most of them would admit that they don't know very much about musculoskeletal issues.

AM: It puts it in context to them excellently. They can follow your logic, they can follow your reasoning and it takes almost no time for us to fill this out. They know what you're asking for without having to trawl through a letter to say it. This is really well received by our local GPs. We actually get quite a few referrals back because they know you're competent when you're sending these sorts of letters to them.

SB: You'll be pleased to know that you two are being very well received as well because Martin has said, "I'm gobsmacked by this already. I had no idea it could start so young. Well done you two." And I think he's talking about you and I'm not included in it. Danielli has asked a question, I think. For our manual approach is there any relevance or worth in differentiating the different types i.e. marie strongpolds et cetera. And why do you disapprove of NSAIDs for AS?

AM: I don't disapprove of NSAIDs for AS. I think a teracoxib is a wonderful drug that I take most days and has made a huge difference in my quality of life. I personally wouldn't recommend longterm steroidal anti inflammatories because of the side effects associated with them. But again, that's the NICE guidelines on management.

SB: Maybe it was misleading earlier on, because you said the drug you've been on for the last six months, the name of which I can't remember, but that's a new development.

AM: The anti TNF drugs, the biological drugs are much stronger. They're suitable for people with severe disease. They're an immunosuppressant. They have very nasty side effects. One in 10 people on them get pneumonia and they triple your risk of cancer. They're not great. They're very strong.

AM: But there are a lot more effective for uncontrolled disease than NSAIDs. And there's different types of NSAIDs that work better essentially. So something like a teracoxsib more powerful than Neproxin, which just a longer lasting form of ibuprofen essentially.

SB: It's interesting because I think that the standard NHS stuff, say's that NSAIDs are equally effective and actually the only differentiating factor is how you react otherwise, the adverse reactions to the drug. So that's not the case either?

AM: No. They're not as effective as biologics. Biologics are very expensive. They're about 750 pounds a pen, and you take them fortnightly or weekly. So they're expensive. The same with some of the more effective selective Cox inhibitors. They cost more money than take some ibuprofen. So they're normally prescribed by-

AC: And we have to talk as well, that there's a spectrum of disease. So for some people we're very comfortable with that when we talk about rheumatoid arthritis, for example, that some people need the big medications, the nasty medications, if that's what people want to call them. And other people manage very well on an NSAID. And this the same with AS, and if they're being monitored by their rheumatologist and their inflammation is being monitored, then that's completely appropriate management for some people. And for other people, their disease process would progress without, and that's the balance.

AM: And it depends on how someone is at the time. I've got patients with axial spondyloarthritis, AS, that are almost fine. They get very limited life effect from it. It doesn't bother them in the least. And 40% of people with the condition are disabled and can't work. So that means 60% are pretty good. They can move around, they can do things, they can work.

SB: 40% are disabled eventually?

AM: Yeah. As in-

SB: But 60% will never become disabled?

AM: Yeah. Yeah. So, on the population data, we know that 60% of people are too disabled to work, was the criteria for it. So, yeah.

SB: So how do you differentiate early on between those two groups? Presumably you can't.

AM: No, it's just monitoring progression and that's where, again, us signposting to resources and things like that can be incredibly helpful. Like the NAS charity, which can support patients in applying for things like personal independence payment that can keep people in work, keep them active.

SB: So in terms of our informing patients that we're advising patients, if you're... Let's say you're diagnosed at 24 with something which could be in the 40% or the 60% category, what's the pattern of re-evaluation and assessment that would normally follow from that?

AM: So it depends whether it's by us or an NHS route or private-

SB: Well, lets say you've gone down the NHS route. We, an osteopath, chiropractors, are referred into the NHS and a rheumatologist has said, "Oh yes, I recognize that."

AM: So there's two main ways to monitor. There's the BASDAI, which is the disease index, that's a questionnaire of quality of life that measures disease activity. The decision to treat with biologics is generally a BASDAI over five. That is generally considered the uncontrollable disease.

SB: What happens? Do they just send you an email every six months that says fill in this form?

AM: You do it at your rheumatology visit. So typically pediatrics at six months, adult is once a year. And you can get physiotherapy that monitor, and that's where they do the Bath indices, which is a set of physical measurements of your range of movement and things like that for physical effect. But you can have a very poor range of movement and very well controlled symptoms, and you can have very uncontrolled symptoms and have quite good range of movement, so that the two aren't... It's an individualized treatment decision essentially that way.

SB: All of this is going to happen outside our clinic. So presumably-

AM: It depends how you practice. So, I do a lot of these measures in clinic. I get patients to download an app where they can record it, which is excellent because it also collects data for Bath Hospital, so they can measure real world patient reported outcome measures for different medications and things. So that's excellent.

SB: But this is after they've been diagnosed formally by rheumatology?

AM: You can only be diagnosed by a consultant rheumatologists. So you can't be diagnosed by a GP or by us. Yeah, it has to be a consultant rheumatologist.

SB: So in addition to you taking... I'm just following through how useful we might be in this. If they're being seen every year by a rheumatologist anyway, is there added benefits in you doing the app and-

AM: Absolutely. Absolutely. For support, for quality of life. And so the full bio psychosocial care that we can deliver to patients. The rate of depression is considerably higher in these conditions than general population, and higher than the back pain population. So we can support patients that way. We can advocate for them to get them into exercise. We can guide our patients through where resources are available like NAS, hubs for exercise or how they can go to the gym, how they can self manage. Personally without hands on osteopathic treatment, I wouldn't be able to work. I've had days where Alex or Freya, who will be watching, one of my colleagues, has treated me because I've come limping into the practice, hardly able to move. I've had a bit of gentle articulation and treatment and I've been able to finish my day. So we can make a big difference to quality of life.

AC: I have lots of patients with this condition and sometimes they're coming in with absolutely debilitating costochondritis and you can do 10 maybe 15 minutes tops treatment, very, very gentle just to calm it down and then they can go away. And they might need to come back six days later and have another one, but you can manage that flare and you can reduce that pain and sometimes that's a little bit sniffed at. Like, "Oh, it's just pain reduction," but that is everything.

SB: Isn't that what happens when you go to a GP and you get an NSAID or analgesic?

AM: This is one of... One of my big bugbears is when people say, "Oh, it's short term symptom relief." Try living with eight, nine out of 10 pain, or, "Oh, I've not slept in a week," and then someone say, "Oh, it's not clinically meaningful," or, "It's not statistically significant." If I've gone from four hours sleep to five, the life effect of that is massive. That can make a huge difference. If you drop someone's pain levels to a level where they can drive home, where they can go to the shops by themselves.

AC: Lift their child up.

AM: It's a significant difference to someone's quality of life. We have a big impact there. But it's like all things, it can be done well, it can be done badly.

SB: I was going to ask you, Alex, you talked earlier on about how your case history taking might have changed now that you're more familiar with this. There's a question coming up on that subject, which is that there's an extra complication of perhaps interpreting the picture told by a teenager when their anxious parent is also there. Is that something you've experienced? And whoever this is, do you have any tips?

AC: Yeah. I think teenagers can be really tricky and I think sometimes it's about building that rapport first. So yes, trying to still drill down. But I think one of the things I say to students a lot is the patients don't know what they don't know. So they don't know that there is this condition that it could be, and that you're actually concerned. So I'm quite flippant often with that kind of patient type. And I say, "I'm going to ask you those really irrelevant questions. You'll probably say no to half of them, but I need to have asked you because I don't know unless I have."

If the parent is getting in the way and butting in, sometimes I go into the actual treatment, if I'm happy that I've got a working hypothesis that I can treat. And then I might start to have it in a more conversational way. "Oh, so do you sleep well?" Or, "Do you ever wake up?" Or, "Is this disturbing your sleep?" And I think that's a way of making a clinical decision. Am I safe enough to treat? Can I start with a bit of treatment and then build that rapport with that patient? That's how I manage it.

AM: And sometimes the picture evolves over a couple of sessions. You get more of an idea and it develops. It's really those key questions are the type of patient sat in front of you. So age of onset of symptoms, under 40 is a big one. The inflammatory nature, so alleviated by exercise, aggravated by rest. Symptoms for more than three months. It's are your symptoms in step with expected tissue healing times or not? Is it multiple episodes of alternating buttock pain or sacroiliac pain? It's what the patient in front of you is saying, what they look like-

SB: We're going to get a picture then of how it might present so it would be alternating sides perhaps.

AM: It can. It can change sides-

SB: And because it flares up, what's the interval between flareups generally?

AM: Totally changes.

AC: One of the things I think is really, really difficult, especially if you're a new graduate, which I mentor a lot, is they often go to their own judgment. So they aren't getting a patient better as quickly as they would expect, and instead of thinking there might be something more to this, they think I'm not doing the right techniques, I'm not being a good enough osteopath, chiropractor. And actually if we had a little bit more criticality, we could think about those things, yes. But also let's rescreen that patient and see if there's anything more that's going on there. And I see that time and time again, especially in a teaching clinic setting.

AM: Or the other way is we... Yeah, some of these patients will just get worse because they're naturally going to get worse. But we also think that I've treated this person that has a flare that maybe lasts for three weeks. I've seen them once a week for three or four weeks, and they've got better. And then they've come back in later with something else, and I'd say, "Oh yeah, that was because I treated them. I did some great manual therapy and I really helped the patient." Or for me going into teaching clinics in the morning as a student, I'd get HVT'ed, I'd get a leg tug or a Chicago because my SI joint was really hurting. And two, three hours later, "Oh, it's great now. It's stopped hurting because I've been walking around." It's alleviated by exercise and movement. I'd have gone into London on the train, been really stiff, really sore, had a bit of treatment from one of my colleagues first thing in the morning, and then felt better and put it all down to the treatment effect and not the movement and other elements.

SB: But an HVT is movement, isn't it? So does that have an effect as well, do you think?

AM: Absolutely. So HVT is absolutely contraindicated for several reasons, which we can talk about. But it's neuromodulation. It's an effective technique for pain relief. They feel nice and articulation feels nice. Yeah.

SB: You brought up that absolute contraindication, so tell us why.

AM: A third of people with axial spondyloarthropathy have a fracture. So insufficiency fractures are the most common type, which is where inflammation penetrates essentially into the joints and bones, and they're weaker. So you get two mechanisms of osteoporosis. You get disuse, traditional essentially, osteoporosis that you're replaced with a rigid column, effused but weak and brittle bone. So that's later stage. The idea that it's okay to treat not in a flare, or it's okay to treat early stage because bone density is good, is absolutely incorrect. The most common region that's fractured is the CDJ. So the idea that we can manipulate that safely because it's not the lumbar spine, again just doesn't stand up to any kind of scrutiny.

SB: That doesn't mean that the most common area inflammation is there, it's just that people are treating that more because they think it's safer?

AM: Yeah, essentially. But it's not fractured by us. Just general fractures obviously, because a rigid fixed kyphosis into a mobile area with an... It's just... It's the biomechanics essentially of how we move. Most fractures occur within two years of diagnosis, and we think as well as inflammation comes under control, so with the stronger drugs and things like that, sacral insufficiency fractures are quite common. So essentially it's you've got a lot of inflammation, that's holding the bone together a little bit. The inflammation drops and you're left with more porous bone, and you're more likely to fracture early stage. So the fractures occur early and late stage. It's not just what we'd traditionally see. So looking at myself-

SB: Which bit fractures in the sacroiliac area?

AM: So it's the sacrum itself.

SB: Just the sacrum itself?

AM: Absolute, sacrum itself. So we look at me and I think, hopefully, I look fairly robust and strong. I have-

SB: We should mention you do power lifting for fun, don't you?

AM: Yeah, I love throwing a bit of heavy weights around. I've got two compression fractures in my T spine. I've got thoracic osteoporosis. I've been manipulated a lot. I don't look like your traditional person with osteoporosis, so it's never thought of that way. We would never really see me come into a clinic and think, "Oh, it's contraindicated. I want HVT there." I have a totally fused lumbar spine. It's never moving. And I've had people bounce off it for 10 minutes trying to crack it going, "Oh, I'll get that moving, a bit more amplitude, bit more amplitude," and it's dangerous.

SB: I imagine plenty of us think we can feel it moving as well, can't we? Because the skin will move a bit and we think, there's a bit of articulation going on there.

AM: Yeah, exactly. And same with the SI assessments. I've been palpated by hundreds of osteopaths, I would say over the last 20 years, and no one had suggested that they could feel it and that's what's going on.

SB: Could you please go and get palpated by a few chiropractors so they get some of the criticism?

AM: Yeah, absolutely. I'll get them... They might have the answer. Might fix it with the HVT. Yeah, so it's that kind of thing in their presentation that warps what we think and what we'd expect from our patient in terms of safety. Who we're looking for, who we're screening for, and what we think we can do to that person.

AC: And it goes back to teaching this better. I think one of the things we haven't talked about is how prevalent it is, and I still think it's taught as though it's not as common as certain other types of arthritis.

AM: And again, the myths that are abundant. So I was told by a student today that someone with sacroiliitis wouldn't be able to walk. They were told that in clinic allegedly that it's so painful you can't walk, you can't move. I've run it off. That's the main treatment for it, is movement and standing on it. Yeah. There's night pain. Other myths like it's going to be red, hot and swollen. You'll feel the inflammation or see it. It's just not true.

SB: You made the observation before we came on air, didn't you? You will not palpate this.

AM: No, not a chance. It's a detailed history.

AC: I can't palpate it in people I know that have it. So I can see imaging and do an assessment and think there's no way I would see that. I can't. And I think I'm okay at my job.

AM: Yeah. You've felt a fair few spines over the last few years, haven't you?

SB: Now, I'm conscious of two things. First of all, people have been watching us sat down here for quite some time where they probably want to see us do something active. And second you probably want to do something active as well because it helps to move.

AM: Absolutely.

SB: So why don't you two go across to the treatment table and we'll just do a few techniques as we discussed earlier on.

AC: So what I wanted to show everyone first is how difficult it is to actually see a spinal fusion. So Andrew, could you do a bend, forward bend for me? So, what we can see here is he can touch his toes. His erector spinae, unless you're looking really careful, actually cheat and make him look like he's got lumber flection, but actually if you look from there to there, you can come back up, he actually hasn't got any movement at all. If I was to do that just gently again, you don't have to go all the way-

SB: Would that be easier to spot without the shirt on do you think? Or is it just as deceptive then?

AC: I don't see it as any different. And his SIJs, I can't palpate a rising firm, a non rising firm. They just feel like normal SIJs and they don't move at all.

AM: That's something I like to do with final year students, is actually to prove the point of this, is get them to do what we're taught is traditional osteopathic tests, like gossip, stalk, standing flection, seated flection, because it's skin movement. They're just not accurate. They're not diagnostic. Whereas provocative tests for sacroiliac joint, so compression, sacral thrusts, they're 90% sensitive.

SB: Just in terms of this, we need to encourage some spacial awareness. You've got your back to the camera at the moment so it's not a good image. And I'm getting some grief in my ear.

AC: Can I get you to lie down?

AM: Yeah.

AC: So what I was going to show is what I might do if someone's really, really flary. So if somebody is coming in and they're really sore, they're really stiff, if they've got a sacroiliitis, what we're not going to do is articulate it for three minutes.

SB: Why would they come in rather than just go for a run? If going for a run gets rid of it.

AC: Because they can't always put their socks on. Yeah. So it's seriously people who are on the more severe end of the spectrum are disabled. Like, actually exercise rehabilitation protocols that we'd be giving them would be try and start to rock a little bit in the shower. They can't stand on one leg to put their sock on. They won't be walking to their car. They won't be walking up the stairs in your clinic if they're in a flare. They can feel a lot-

SB: And this where you said that pain, six or seven out of 10 or worse?

AC: This is where Andrew was six months ago. He wasn't walking from his car to my clinic without needing to lie over a Swiss ball.

AM: And that's thing with disease. During inflammation. I walk with a walking stick some days because I can't move, can't put my own socks on. And then other days I can go to the gym and lift weights and move around. But they're standing, can't get dressed unaided. Standing in a hot shower, gently rocking is the level of exercise. And someone in that much pain and discomfort, saying to them, "Just do some exercise. It's really helpful." They're like, "I would if I could put my pants on to go to the gym."

SB: But you've got to put your pants on to go to the osteopath, I hope.

AC: Hopefully. So if he was having a flare, then I may just do a little bit of a harmonic through that sacroiliac and up into the lumbar spine. And the amplitude would be this. And I would probably-

SB: Most of the movement we're seeing there is skin movement, isn't it?

AC: Yeah. And the length of time I would do this for would be between 30 seconds and a minute and a half depending on my patient. And I would, if they were mid flare, I would probably treat for no longer than 10 minutes.

SB: Right. And how would you feel while this is being done? Is this painful or does this immediately feel relief?

AM: A bit of both, unfortunately. So treatment and something like a sideline SIR articulation is very painful, but I will tolerate it. As a very informed patient that knows the outcome, I'll take that fairly well. And it generally hurts a lot at first, but I know it will be effective. So I have those contextual factors.

SB: How long before you feel the relief? Again, this is important for us to advise patients, isn't it?

AM: Absolutely. So sometimes fairly quickly as in five to 10 minutes of treatment and then I feel a lot better. Sometimes it doesn't help. Sometimes it helps very quickly. It just depends on the day. It's a very variable presentation and sometimes over-treatment will leave me considerably worse. So a stronger structural treatment and I might have to have the next day off.

AC: Me as the clinician, because they're young, healthy people, in my terms of my clinical reasoning and my adjustment of what I've learnt over the last few years, I've been seeing a lot more of these sort of cases, is if I have a question of should I treat this, should I do this next bit? The answer is no, stop. Because they seem healthy. And I think what we do a lot when we're experienced in practice is we're downloading a lot of information, and we're making those automated decisions of lots of different factors. Like do they look well? And they often seem well, and look well, look healthy. You think, yeah, they could take this. But actually they can't. And I think under treat, and the way I do it is I often do a half length treatment or even shorter. And for me personally, ethically, I do a half fee because I might have to see them in another six days, five days time. And for me, I feel that that's a good balance, for me as a clinician.

SB: Well, I can completely understand about, not that last part, but I can understand it. But if you came to my clinic in pain, I would look at you and say you can take a lot of punishment, as it were. And I would probably go down that route and make you a lot worse.

AM: And I've had that done several times.

AC: And if somebody can't even lie down, for example... Shall we show some seated thorasics? We will sit that way.

AM: And here's one I made earlier. And that's from half an hour-

SB: The other way.

AM: -half an hour of sat on your couch and then on here, and I'm stiff as a board.

AC: So if you wrap your arms around yourself. So one of the things I think is nice to do is just some resisted rotational work, because I think rotation can feel really nice. So if you rotate back against me. And then sometimes I just let them win. So keep going. And that just helps us by lengthening. But I think what also we're trying to do if they are flaring, is we're just actually trying to get a little bit of a pumping action going. So we're trying to get that inflammation moving.

If they're sore enough that they can't go out and exercise, exactly what you were saying, then actually can we do that in a passive way? That feels really nice. So I think just some gentle articulation, let them lean against you if they can't move themselves, and then that should help just calm things down. But it's all of these kinds of really gentle approaches that are beneficial. I think historically what osteopaths talked about, and chiropractors probably, is can we change the disease process? Can we slow that down? We're not talking about that with this treatment at all. What we're talking about is can we make them feel better whilst their disease process is being managed by rheumatology? Okay?

SB: Well it is actually reassuring to know, isn't it, that I haven't got the NICE guidelines to hand, but I'm presuming they say that physical therapy is still recommended?

AM: Absolutely.

SB: So it's not as though GPs are going to say, "Well you can't cure this disease. You shouldn't be treating." This is actually very symptomatically very helpful.

AM: And I often get accused of being anti osteopathy or chiropractic in it, because I think that co-management and diagnosis is so important, but I wouldn't still be working without osteopathy. It's given me my life back in a lot of ways. It's a massive staple of how I manage the condition, is exercise and hands on treatment. Makes a huge difference and it just can't be the whole answer. Because the big problem as well with delaying diagnosis and treatment, is that we treat people effectively, they get symptom reduction, go on to not be diagnosed and get disease progression whilst they're symptomatically controlled. Because they're still fusing and progressing. So at worst we can really help people to manage it whilst they just slowly get worse.

AC: One of the things I talk about all the time to the students when we're talking about with condition is, if they haven't had the correct diagnosis, you actually haven't got informed consent.

SB: Right.

AC: Because they don't know their prognosis. They don't know their risk benefit.

AM: Or alternatives.

AC: Or alternatives to having manual therapy.

SB: But you can always argue that we have a working hypothesis quite a lot of the time, your working diagnosis. We can't always give them a correct diagnosis, so that-

AC: No. But we have to do it to the best of our ability. And that's why we're shouting about it.

SB: Okay.

AM: And there's lots of the qualitative data or the things said by patients on the forums and things like that, where they've had professionals say things where out of date information, like the biologic medications that an awful lot of us aren't aware exist. We don't know that's an option for these patients, so we can't give them the choice because we didn't know about it. Which is actually, for experts in back pain, we should know about these alternative forms of management. And osteopaths, chiropractors or the people saying to a patient, "Oh, there's nothing can be done. It's ibuprofen and exercise." When in fact there are fairly decent management options available.

SB: It's certainly the case in both for chiropractic code and in the osteopathic practice standards, that we're supposed to be able to sign post people to what they need, even if we can't treat it ourselves.

AM: Absolutely.

SB: Informed clinicians are a very important part of that.

AM: And we all want to do well for patients. We want patients to get a good outcome and a good result.

SB: Alex, while we're here, let's pretend Andrew's come to you for the first time with his back pain and you talked about how your case history taking had altered. Could you talk us through the bits that aren't quite common in normal case history taking, that you've-

AC: Yeah. So I think-

SB: Why don't you twizzle round that way? And you go to the other side and then at least the cameras can get a good shot of you.

AC: You can twizzle.

AM: A good twizzle. Just about.

AC: So I think one of the things that would... A typical patient might have said to me is, "When I lifted something," and what I have then changed, I would discuss all of that. And then I would, exactly like I said before, I'd go, "Oh, so I'm going to ask you a few questions that you may or may not think are relevant, but I really want to have asked them. So when you've had this episode, have you ever had anything like this before?" And I see what my patient says. So they actually they might say, "Yeah, do you know what? It happened on the other side six months ago." Okay, tick box.

"What about... Have you ever had any problems... You're really active. Have you ever had any problems with your feet?" "Well actually yeah, I have had this heel pain," might be something that they say. And then if I've had those two answers, I then start doing more of an inflammatory screen. So, is this bothering you at nighttime? Now, we all get taught that that can also be a discogenic symptom picture. But if you're getting these sorts of things stacking up, then I'm thinking, okay, inflammation. What's it like first thing in the morning when you wake up?

SB: Could I stop you there? Again, I would need to put these together in an informed way and someone who comes... A chap like this who comes in with back pain but also goes running, he might well have had heel pain for all sorts of reasons. So is that sufficient or have you got to put it in close connection with one of the other problems?

AC: When you look at the SPADE tool, you would put all these things in. So some of the other things are... It can be any tendon that's become inflamed and dactylitis, so when you get a sausage finger. Anyone who's had anterior uveitis or an iritis, anybody with a family history of inflammatory arthritis or even a psoriasis. And there's a whole list of them on the SPADE tool.

SB: And Danielle, who questioned us earlier, came back to me after we'd asked that question and said he'd just looked at that tool, and he says it's an excellent diagnostic tool, so people should definitely-

AC: Brilliant. So, actually really if you have that SPADE tool in your thought process, then you can run that down in a more organic way in a classic case history type of pattern. And you've probably... Well what I find is I've probably asked the spade tool to work out whether I want to do a SPADE tool generally. And I think what I'm finding is if it's more than four that I'm clicking, then what I'm getting told is to refer, generally, by the tool. So I would always start-

SB: Do you actually bring it up on your computer and then run through it? Or have you got it so-

AC: I usually do it... So I have it bookmarked on my computer. I do all my notes on the computer anyway. So I have it bookmarked, I click onto it and I usually go through it all again with the patient just to make sure there's nothing that we've missed, or nothing that they haven't thought of immediately, because that's always the case, isn't it? That they think of things second. And then I will follow whatever that tells me to do because that's following NICE guidelines. And it is a referral. We could be happily wrong lots of times, and I prefer to be happily wrong and have them have a blood test than have missed somebody personally.

SB: And the blood test is still for HLAB27 is it?

AM: So 40% of people with axial spondyloarthritis will never have a positive ESR or CRP, which are the traditionally done blood tests. So some people will never have raised inflammatory markers. So you would do a full blood panel, you'd do ANA, so anti nucleic antibodies to rule out other autoimmune conditions because there's a lot of overlap. These things are messy. There's a lot of similarities. You'd measure a rheumatoid factor to see if it's RA but also it's not definitive. So some people can have a negative HLAB27, and still have Ax Spa.

SB: And similarly 10% of the population do have HLAB27?

AM: Yeah. And don't ever go on to have the disease. But it's very heavily linked. If you have the signs and symptoms and you are HLAB27 positive, your likelihood ratio does tip dramatically. But that's part of the SPADE tool, is an HLAB27 positive-

SB: Did you say you are HLAB27 positive?

AM: Yeah, I am.

AC: And that's one of the reasons it has to be referred to a consultant rheumatologist, because they know these things. A GP isn't going to be dealing with these things every day. A consultant rheumatologist need to manage it and they need to order the correct MRI. And I think another false reassurance for clinicians is, "Oh, they've had an MRI. It's a lumber disc." You have a lumbar disc prolapse, and actually it's not the correct type of MRI. You need an MRI with STIR, which is only typically done by rheumatologists who are suspecting this.

AM: And again, whole spine. Just having a lumbar... It has to be whole spine including SIJs for it.

SB: Is that within the GPs discretion though? Does he not refer to a rheumatologist and they make that decision?

AM: It depends on where you are. So, where I am, it has to be a rheumatologist that sends for that scan, for that test. Yeah. And depending... So Bedford, where I work, you have to be sent to Circle MSK and go and see a physio to make the decision. So your GP can't refer you directly to rheumatology, they send you to a physio who assesses you and does it. So I felt quite sorry for my poor physio when I rocked up and asked for the referral.

SB: Well, I have to say, when I was serving as a Royal Marine, the Royal Navy always used to think of us as being the stupid ones. Not very clever but can lift heavy weights. Actually you've got a prolapsed disc in your lumbar spine and you lift heavy weights.

AM: Absolutely. Exercise is great for that. Good for back pain.

SB: Did you want to demonstrate any more or shall we inflict some sitting down on him instead?

AC: Let's do sitting.

SB: Right. Okay. So lets go back over here. Someone with no name or someone who hasn't given us their name has asked a question about medication. Their GP is reluctant to prescribe itoricoxsib for DISH, as she says that the NICE guidelines only allow it for anky spon. Also she's wary obviously in conjunction with Mesalazine for IBD. Luckily she can be persuaded, but is this correct? Also, she says even for AS, it's only approved for short courses of treatments. Any comments on that?

AM: So, I don't know. So some people would have a PPI with it. I'm on itoricoxsib daily forever, and I know plenty of other people that are for AS. Again, it's one that is typically prescribed by their consultant room rather than by the GP. It's a little more expensive. I wouldn't be comfortable as it's well outside my scope of practice to be advising pharmacologically. I would say you should have a specific rheumatological nurse that can advise you or your consultant room. Most patients will be given contact details for their hospital team who are involved in the management, who can make that decision and that discussion in an informed way. It's totally outside my area of training and knowledge. And again, DISH, I know a reasonable amount about, but it's not a condition that I'm an expert in by a long way.

SB: I've forewarned you of course about this very, very long observation and question which came in from Matthew, can I run through it and I don't think we'll be able to spend too long on this, because it is about DISH. He was diagnosed a few years ago with Diffuse Idiopathic Skeletal Hyperostosis, or Forestier's Disease, which I didn't know. The only differential was enclosing axial spondyloarthropathy. That could only be ruled out by, HLAB27 test, which was negative in his case. You've got any comments about the similarities between the two diseases or the two conditions, and how you treat and manage them?

AM: The differential wouldn't be on the bloods, the differential would be on imaging presentation. The same with psoriatic AS and DISH, look different on x-ray once they're at that stage.

SB: In fact, we've got a couple of images that were sent in by Matthew, and if I get the team to put those up on the screen for the audience, it's probably quite obvious to them then what those are. Justin, can you put those two images up for us? Yes, you have. You won't see them on that screen, you'll see the one that screen over there. Could I be forgiven for thinking that the image on the right is a bit bamboo-ish, or is that just, it's not really, is it?

AM: No, and the anterior AxSpa or AS, you would see the, what would look like the anterior longitudinal ligament would be calcified. You would get interspinal.

SB: Yes.

AM: It would be, dagger sign is what the radiological sign is called, dagger sign. So it looks like, you'd love a little dagger being a boot neck. It's the sort of knife like appearance down in the anterior vertebral body, the parts on the outside coming up, so that is more typical of psoriatic arthritis, how that looks radiographically, or DISH. They just look different on imaging really.

AC: We have to make that clear that all of these changes on imaging. We are trying to avoid ever seeing.

AM: Yeah, yeah, that's late stage disease.

AC: This is late stage disease process, and if we get these diagnosis correct, we shouldn't be seeing this anymore.

AM: I jump on radio-pedia and just look at the different imaging features of them, because they look different. There's that essential one and management-wise, again, I don't really know how we manage DISH, that's outside of my knowledge base.

SB: Okay. I would run through the rest of Matthew's observations here, but it's probably, as you say, it's outside your sphere of influence and expertise, isn't it?

AM: No, an awful lot about AxSpa. Not a lot about anything else.

SB: Okay. He did actually send in an observation earlier on on, about this same, I can just find it on my little list here. Didn't your definition of AS actually therefore include DISH? As I understand it, he says it looks the same radiologically but there's no HLAB27 marker, which we've just covered. They don't look the same radiologically.

AM: No.

AC: Different disease process.

AM: Yeah.

AC: Also, DISH is classically a lot later onset.

SB: Right.

AM: Then it's with metabolic factors, so diabetes is a comorbidity with that often. Even the HLAB, as we discussed, it's not a definitive marker for disease. So AS is diagnosed by typically the modified New York criteria, which are a set of radiographic criteria for diagnosis. It's essentially you sit there with your criteria and tick the box whether it is or not, but again, that's done by radiology and rheumatology. That's not ever a decision that I'll have to make.

SB: I tell you what, we have got such a lot of questions here. We're never going to get through these, but Kerri has asked about drugs and then said, you mentioned earlier that some drugs slow the progression, which slow progression? NSAIDs or AntiTNF?

AM: The jury's out on both depending on source. We think AntiTNFs slow the progression by up to 80%. Other sources say they don't. They've not been out long enough essentially for us to have prospective cohort analysis over a long enough timeframe. Once they're in common use for longer, we'll know. NSAIDs, they don't think affect disease progression at all.

SB: Right.

AM: Although-

SB: If either of the two drugs do-

AM: It'll be the biologics.

SB: It will be the biologics.

AM: Again the osteoporosis prevention there, it cuts both ways. Unfortunately, due to the complex nature of it and the expert opinion is the level of evidence we're on for this unfortunately. So it's so poorly understood that different sources and different experts will give you a different opinion on-

AC: Different rheumatologists will consider different things.

AM: Yeah.

AC: When we went to the NASS Conference, the rheumatologists there said if it's well managed with NSAIDs, they would keep that person on NSAIDs and just be keeping an eye on the inflammation level to make sure there wasn't that, but that still isn't backed up by research, because the research hasn't been done yet.

SB: Right.

AM: Also, then that's the risk benefit ratio. We know that the cardiovascular mortality with NSAIDs is a lot higher dose, it's basically you roll the dice and take your chance. The quality of life change to most patients with poor, say poorly controlled disease, it's worth it. They're nasty. No one hides the side effects. You get a massive leaflet and you have to go through a lot of meetings where they say like, "These drugs will suppress your immune system. They've really, really bad for you and they'll really mess you up." You're like, "Yeah, please just give me those drugs. Just give them to me."

SB: Yeah.

AM: Yeah.

SB: What about nutrition? Apparently several people have asked whether there's any evidence of effectiveness of nutritional dietary changes.

AM: Yeah, so I've got several nutrition qualifications that is no diet that has been shown to be effective. There's a lot of myths that go around. There's an awful lot of people wanting to make money off the chronic illness community and patients that are vulnerable. There's-

SB: Has Gwyneth Paltrow come up with anything yet?

AM: Not that I'm aware of-

AC: No.

AM: I wouldn't fancy her candles. Yeah, we go for NHS nutrition guidelines. We know that there's some D deficiency and calcium deficiency because of the formation of bone and things like that. Supplements are often recommended for the patients with these conditions.

SB: With evidence that they're doing some good? I presume.

AM: Mixed bag, unfortunately. Again, it's the absorption rates. There's no evidence of supplementation being effective to control, but healthy diet-

AC: We have to also remember that this condition can come alongside inflammatory bowel diseases.

AM: Yeah, so malabsorption.

AC: So actually, even if you are suplimenting, you're eating really, really well, is that actually getting into your body? It's really difficult to know.

AM: Yeah. The best way to describe this is, my colleague Zoe is vegan and does loads of yoga. I basically live on meat and do lots of weight lifting, and we both have AS. There's almost an element of blaming people for being ill. What did you eat? Oh, it's because your diet. It's because you drink too much coffee. That's why you've got X, Y and Z. No diets been shown to be effective in management, other than a general healthy diet. General weight management, we know is useful for-

SB: You mentioned coffee, are there any things which, help worsen the condition or-

AM: Absolutely not, and not across the board either, but that persists as a myth. For patients, if they eat a certain food, then get a flare. They link the two and go, "Oh, you know what it's because I had some tomato soup and that's why I've got sacroiliitis," and it's just not-

AC: Actually, what I think-

SB: Claire's, sorry, Claire's fond of telling a story, my wife, she's fond of telling a story about a patient who came in with low back pain, said, "No, it was all brought on when I ate an orange in the bath," and you think-

AM: Yeah, what? There's a joke in there somewhere.

AC: I think the psychological aspects, I deal, not talking about AS, but I deal with a lot of people that are new mums and so that then extrapolates to this, like if you're telling people to make major lifestyle and dietary changes whilst they're massively fatigued, really unwell and you're saying cut out dairy, cut out gluten, don't drink coffee anymore. Then actually, what is that doing to their mental health? What does that do to the alostatic loading? Actually you're making them less well emotionally by loading that onto them.

AM: Which is not building self-efficacy with that stuff. We're knocking away at patients, and that's where some of the work by, like Ben Darlow on the qualitative data on words, the effect of things that we say that they have on patients, as well as with any health professional reading, I think it's just totally, yeah, it's something that we should have as core text in all of the curriculum. We need to be aware of the power we have over patients, who are inherently vulnerable with the things we say. I mean, and that's across the board. I saw a rheumatologist who looked at my scans and said, "Oh God, you're still working."

I was like, "Brilliant mate, way nocebo your patient totally." It's like literally, "Oh yeah, you should apply for a blue badge. You'd definitely get one." I was like, "This is before you've asked what I'm doing. The fact that I'm in the gym two or three times a week," but it's just, yeah, it's not just us, but we send their postural exam, "Oh look at that. Your back hurts, your posture. Look at that kyphosis, it's a fixed fuse. That's why you've got anterior head carriage, if you've got AS." I've been told that that is my tissue causing symptom and things like that. It's, yeah, words matter.

SB: Another anonymous question. In this person's experience of having AxSpa, they also had another auto inflammatory condition, which is, oh dear, hydrogen, hidradenitis suppurativa. Does that make sense to you?

AM: Yeah.

SB: Good, because I've never heard that one before. Sorry if my pronunciation is appalling. It's just disappeared off my list. Where's it gone? It would be helpful if my questions didn't suddenly disappear. When my HS was bad, my AS was very good. For me they're clearly linked and I was wondering whether there's any data linking AxSpa with auto inflammatory skin issues, or am I a rarer case?

AM: No, there is some, I can't very remember the abbreviation of it, it's escaped me. There's inflammatory skin conditions that are linked to it. Same as psoriasis isn't dactylitis. They are heavily linked. It's possibly coincidental. There's anecdotal data that things like uveitis flare in a period of joint remission, that's not, it's not supported across the board. It's just something that some people have noticed. You can have multiple autoimmune. Generally if the autoimmune, if the immune system goes wrong, you can have a lot. Like the way that people get Sjögren's and RA. You can have inflammatory bowel disease, you could have ulcerative colitis and AS or AxSpa.

It goes wrong and it affects multiple systems. It's common. There's also a bizarre link that we don't understand at all between hyper-mobility, so benign joint hyper-mobility syndrome, which you obviously know a huge about more about than me, but that and AS, a lot of people with anky spon, axial spondyloarthropathy are also hypermobile. That masks it, because they've got a condition of stiffening. It's a stiff axial spine, very hypermobile periphery. That's why I can touch the floor, as opposed to this rigid poker back reduced range of movement. That just muddies the waters and makes the diagnosis really unclear.

SB: Which actually somebody-

AM: Which is fun.

SB: This is a question which I think you have gone over a few times, it's worth going over again, because whoever this is says that when they were at college, we were all taught that the diagnosis of AS was based on SIJ lumbar fusion.

AM: Yeah.

SB: That's apparently, what you've said says that's advanced disease.

AM: Yeah, absolutely.

SB: At the very earliest stages what would be the markers? Would it have to be radiologic again?

AM: The markers are the SPADE tool and the symptomology of it, and then it's inflammation on SIs, but an MRI with STIR will pick up inflammation on MRI like 15-20 years before the bone fusion-

AC: You can see it, and that's why we started to see that women can get it, because women start with those MRI STIR changes, but their bone fusion is typically a lot, lot, lot later. That's why that one to one ratio is now the standard, where it's three to one, and that's completely different. I mean, I don't know how long they've been doing MRI with STIR, but it's fairly new that we're coming across it regularly. Yeah.

AM: Yeah, so age of diagnosis is coming down. Women are being more diagnosed with it and, and missed less frequently. The presentations different, but it's not-

AC: What I would say to everybody who's seeing patients, look at your chronic patients, especially your women chronic patients, are they missed AxSpa? Actually, if they were starting with these symptoms in their late teens, early twenties they may have seen a rheumatologist, who at the time didn't have access to all of these sorts of resources and actually now could go and get help and better management.

AM: Before I had an episode of anterior uveitis, I wouldn't necessarily have ticked the box to go through that algorithm and the diagnosis. I would have still had the disease, still had the same bony fusion, but not ticked it. That's what triggered me to think of it when I had that, oh my goodness, it's this. It all dropped into place and made sense, but AxSpa and AS are equal prevalence in the population, so it's 50-50 between radiographic and non-radiographic AS. Equal prevalence, male to female. It's one in 200 in the general population overall, and so symptomatic, not symptomatic. In the low back pain group, which we see an awful lot more of, it's somewhere between five and 17%, depending on source. So it could potentially be one in five patients we see displays inflammatory features, which is huge. We're going to see these people, because they seek help from people like us over some point. It's not, we can't extrapolate the general population data. There's flaws with that in a really geeky research epidemiological way that we don't need to go into, but we're seeing it.

SB: Sure.

AM: We're seeing it often. These are the people that are coming to us for help.

SB: Yeah. Alex, Danelli has asked a personal question about your treatment earlier on about-

AC: Yeah.

SB: Just how much force are you using in that, so in that seated rotation technique?

AC: Not much. Really. I'm just going with the person's ability to rotate. I would always be guided by the patient. Physicality makes a big difference. So because Andrew is muscular, and he does a lot of exercise. Actually he is still quite nice and springy and mobile and you get that nice sort of feeling that he can have a rhythmical treatment. Actually, if somebody was underweight or not strong, actually I think the amplitude would come down much lower. Also, if he was having a flare and he had costochondritis, I would be doing it about half that amplitude.

SB: Really.

AC: Yeah.

SB: You were also doing it as a muscle energy technique where-

AC: Yeah.

SB: You were resisting and you said that you were letting him win as well.

AC: Yeah, and a typical muscle energy technique that I would treat, I'd say get the patient to do 20% of their strength in a MET approach with someone with Axial Spondylo, I probably would come down to 10 or even 5% of their strength. Yeah.

SB: MET is quite a useful technique for them.

AM: It's nice.

AC: Yeah, but you've got to be also cautious that they could have tendon inflammation, so you don't want to do really, really strong ones.

AM: MET can lead very nicely into your home exercise prescription, so the idea being that it's an active intervention, they're not a passive recipient of care. We're building that shared decision, making that shared work that you're not just a piece of meat lying on the table. You're a person and you're involved, but you can then lead on those rotational techniques. You could get someone doing those in the shower against isometric contraction, against a wall. You could give someone a TheraBand and get them to do those active movements and MET is relatively simple to teach someone to do, or their partner to do as a sort of emergency toolkit when they're flaring. You could-

AC: This might be at two o'clock in the morning, it's likely to be at two o'clock in the morning.

AM: Yeah.

AC: You need to give them something that they feel that they can do, that they can manage. A tool for their own self care is massively important for their own emotional welfare. It's huge. Also, if you think you are possibly dealing with someone that also is osteoporotic, they may have had some osteoporotic fractures. They may have lost complete confidence in their ability to move. I had somebody recently who is in that picture and they didn't want to flex beyond about 10 degrees. They were perfectly capable of it, but the osteoporotic fracture had happened when she rotated, and she was really, really worried about doing any movement at all. Just starting with something that is isometric that they don't have to move, so they start to regain the confidence in their body and then they can access, oh, actually exercise is now helpful and we know that exercise is actually also been shown to slow disease progression. It's massively, massively important to begin a process at a level that is appropriate for them.

AM: That's the thing of, like falls prevention, because we've got that, the two way street essentially of osteoporosis and increased falls risk. Mortality and danger from that, and even young fit healthy people, when I was very flare-y, so the BASDAI score of how you measure disease progression. When I was at an eight or a nine, I couldn't work upstairs in the clinic. I fell down your stairs.

AC: Several times.

AM: A few times when I was working, and I lost a lot of confidence. That's one of the main reasons I started walking with a stick, was because I was falling over a lot going up and down stairs, rushing for a train in London. If you've had osteoporotic fractures and you're falling, being an osteopath, being ex-military and weightlifter-y, I'm not your sort of person you typically think is going to feel vulnerable and feel scared, but that feeling is there. I was scared to walk upstairs on my own without holding the grab rail or scared to get in the shower. Once you've fallen over getting out of the bath and properly clonked yourself, you do start to have that big effect on activities of daily living. That's where we can make a big difference to people's lives, as well as the confidence to get in and out of the bath.

SB: Yeah. An anonymous query about help with a GP. They thank you for the referral letter that they sent, but this person says they've got two patients that the GP won't help; one a 55 year old male, non-smoker or drinker and is a Forester. Lots of heavy labor. Has back pain and now no rib expansion, can't breathe properly. He's been x-rayed and there is osteoporosis showing in the spine, so he's been on injections for osteoporosis for 18 months. Any advice as to how to approach the GP? Again, I'm guessing you're going to say SPADE Tool.

AM: I mean SPADE Tool, formal referral letter such as that, you might be able to supplement it with things like the bath index document, the rib expansion, but I would advocate, this is why we called our company Advocate and Educate. It's the, copy of the letter to the patient. Have the patient say to the GP, can you document in my notes why you're refusing to send me for further testing? That I've requested further imaging or requested a rheumatology referral. Can you document why you're not sending me for this? That, it's a really unfortunate fact and it shouldn't be the case, but if you say to a medic, can you document why you're refusing this test?

SB: They think harder about it, don't they?

AM: They do it. Yeah, absolutely. Yeah, I've heard that. Can you-

SB: They say here that, they say the back pain has been going on for 30 years and the GP has dismissed it, because he doesn't have SIJ morning pain.

AM: Yeah, and it could be anywhere in the spine, but it might even not be AxSpa, it could be any other rheumatological condition that needs assessed beyond the GP. I mean the general advice, try a different doctor, try seeing someone else in the practice, try going to a walk-in center, but a really well-documented letter from us. We can pester the GP and advocate for our patients in a very strong way. You might just need to see another doctor.

SB: Some of you, you remember you mentioned brain fog earlier on?

AM: Yeah.

SB: That you get, and I connected it with chemotherapy because someone mentioned the same thing-

AM: Yeah, yeah.

SB: In connection with that with breast cancer some time back. Do you know, is the brain fog to do with the disease or to do with the drugs?

AM: We think it's to do with the inflammation but Anti TNFs are essentially chemo drugs, so they can mess with you as well. I think it's general tiredness, lack of sleep's massive in AxSpa. Tiredness-

AC: You had brain fog before you were on your Anti TNFs.

AM: Yeah, I mean I was doing an anatomy lecture, and I called feet leg hands, because the word went totally. I was doing this lecture actually at our clinic the other day and I forgot medial malleoli. I looked to Alex and said, what are ankle knobs called?

AC: Yeah.

AM: Just, yeah, yeah.

SB: Yeah, -clinic anyway.

AC: That's another frustration though, isn't it? Talk about it seriously, so you've got physical people that are in professional jobs and actually they lose their physicality. That's a really hard process anyway, and then they also lose their mental acuity.

AM: Absolutely, and I would say that I'm, I mean I've done quite a few postgraduate qualifications, and then I called the fridge the big white cold cupboard, that's ...

AC: Actually, they haven't got anything almost to fall back on. They have like, "Okay, well I can't do that at the moment, but I'm really succeeding at work. I'm really succeeding with my postgraduate thing," or whatever they want to do. Actually, they've lost a lot of themselves as a person and a personality type. I think that's massive.

AM: Massive identity crisis and for young, active people in that way, so we know that the mental health contributions that it's about 40% I believe of patients with axial spondyloarthritis have depression and mental health issues, because of the disease burden. The rate of suicides three times higher than the general population. This is a serious thing. I was taught it was a bit of back pain or a bit of back stiffness, but violent death, alcoholism, marriage breakdown, things like that are massively more common than they are within the general population. This is a, yeah, it's got a big life effect on people.

SB: We're never going to get through all these questions. I might have to ask you if you'd be prepared to handle them after the broadcast.

AM: Yeah, absolutely. I'll do a rapid fire round. I'll stop giving long-winded answers.

SB: Well, Amanda has asked for referral help, or about referral help. Is there a minimum and maximum age of diagnosis by applying the SPADE Tool? Would it be appropriate to refer an older or younger patient considering a possible miss with previous diagnostics? How do you request this full extensive blood screening from a GP? Is it just a referral to the rheumatologists that would decide?

AM: So blood tests, HIB27, inflammatory markers, cheapest chips for the GP today.

SB: Age is unimportant?

AM: Age is important in the sense of age of onset, not age of the patient now. I had that patient who is elderly, clearly had AxSpa. Age of onset, not how they are then. After 50 those same pictures start to tip you towards a degenerative etiology and away from an inflammatory. So if I had sacroiliitis, and I'm 60, it's more likely to be OA. Juveniles, we're looking with children. There is juvenile onset AS. AS can start very young, but you want to rule out JIA, juvenile idiopathic arthritis. Other conditions that may manifest in a similar sort of way. There's a lot of other things we'd look at there, but yes, but also no.

SB: We're also able to tick the box on the osteopathic requirements for CPD of consent here, because Elspeth is picking up, not picking you up, is asking you about what you said over there about, well what the hell do you do to protect yourself against having the wrong diagnosis when you treat a patient? Especially if the GP hasn't got it right before you.

AC: Yeah. I think we can't rely on GPs to get it right all the time. I think we can't rely on any other professional. In my clinic we get commonly referred patients that other people aren't able to get better or don't feel like they've worked out. I deal with this a lot. I was recently having an animated conversation about, well no one's good at getting informed consent. GPs are rubbish at getting it, and I thought, well yeah, well all professions can be poor. That doesn't mean our profession has to be poor. I detail in my notes the conversation I've had with the patient. I will tell them if I feel that there is clinical uncertainty, I will say to them, "I think possibly what's going on is X.

I'm happy to treat you and I think what we'll be able to do is give you some symptomatic relief. However, I would also like to refer you because I think that this needs to be assessed or that needs to be assessed. Are you happy to have some symptomatic treatment while this ongoing diagnostic criteria is being answered?" Then I detail their response. I think that's as informed as you can be while there is clinical uncertainty. I think, yes, we need to have a working hypothesis, but for me, that can be a tissue causing that symptom that day. You could say sacroiliitis with a lumberxspinae hypertonicity, and that's what you treated on that day. Underneath that referral for AxSpa imaging.

AM: I mean, that's very different to telling the patient well, there's nothing they can do about it anyway, and then treating them for a sacral torsion or an SIJ dysfunction for 10 years.

AC: Exactly.

SB: Right. Another question about brain fog I'm afraid. Does chronic inflammation, sorry, does chronic inflammation affect B12 absorption? Which of course can cause brain fog.

AM: I believe so.

SB: Yeah.

AM: Yeah.

SB: Okay.

AC: Then that goes back to the bowel things, AS has bowel symptoms too.

SB: Yeah.

AM: Yeah.

SB: Actually, B12, if anybody watched our program on B12. Did you watch that one?

AC: Yes, I did. Yeah.

SB: Brilliant wasn't it?

AC: Yeah.

SB: I mean, it's just amazing what we learned from that. I thought, Or certainly what I learned.

AM: Another factor of that is if you're on longterm NSAIDs, often you'll be with the PPI and Omeprazole will affect absorption of magnesium, and B12, things like that as well. It's pharmacological as well as chronic and controlling. There's many ways that it works. Long answer, the short answer is yes.

SB: Yeah. Yeah. Rachel has asked a question, again about brain fog. Would you expect raised inflammatory markers if the patient was experiencing brain fog or could these still be negative?

AM: No, so 40% of people will never experience a raised inflammatory marker with it. I've never had a raised ESR. Even feeling very bad, so, no.

SB: Right. Several people have asked about the MRIs. I think they're confused by you talking about MRIs with STIR, which is S-T-I-R, which I can't remember what it stands for.

AM: It's a fat suppression sequence, is what you've got to know. It shows inflammation, suppresses fat. If you aren't sure, and you ask for an AS sequence, they'll know what to do.

SB: Okay.

AM: The radiology department do it a lot. It's whole spine with STIR is what you need.

SB: Are we going to refer to a physiotherapist to get that referral anyways?

AM: Yeah, just tell the doctor I'd like an image for AS. They'll do the rest.

SB: Oh dear. Let's see if we can get two more of them. What about the link you mentioned with fibromyalgia? Is there a link between or it's a misdiagnosis-

AM: No. No. Misdiagnosis.

AC: I think it's a common misdiagnosis.

AM: Particularly with women, not the same etiology at all. The same with sensitization or psychosocial emotional issues. They present incredibly differently. We can differentiate clinically and with a robust case history.

SB: Okay. Psoriasis. What's the typical coverage? Does it have to be a lot of coverage, or can it be a tiny patch?

AM: It's any patch, anywhere. 20% of the people will have psoriasis and AxSpa, and it can be anytime in your life. I had psoriasis as a child. It wasn't picked up as part of my diagnostic screen.

AC: I have a patient that had one patch of psoriasis once and she's got, diagnosed with psoriatic arthritis. It's not always the case that psoriasis has to be massively prevalent on the skin to have a diagnosis.

AM: The psoriatic patch being over the area of joint dysfunction isn't true.

SB: Okay. I'm going to give you, as a special bonus, I'm going to give you one more, one more question.

AM: We've got it.

SB: Steve. Steve Graham says he's a practicing osteopath and he wants to talk about pain. He concurs with the impact of lack of sleep user pain. Currently he's unable to work while recovering from cordal epidural and S1 nerve root steroid injection to treat the effects of herniated disc. He's a new convert to taking analgesic medications, and now has a whole new understanding of what patients report. At least our patients know that we are also human and not immune to that.

AM: Absolutely.

SB: So it was an observation about the effects of pain.

AM: Telling the patient not to take the drugs, oh, those nasty drugs, those toxic drugs. If your patient cannot work, cannot get in the car, can't live their life and they have no quality of life, but these drugs will let them play with their kids, live their life. They are well worth doing. It's not for us to preach and tell our patients not to take these things.

AC: It's not for us to make that decision. They have to have that. They have to have everything laid out to them. Explain to them in a way that they can understand and they can weigh up the pros and cons for their life, how they want to live it. That's not our decision to make.

AM: Yeah. Patient centered, not paternalistic healthcare where we dictate to them.

SB: Right. Well the last thing off my question list here is not a question. It's a bit of praise for me actually, it says Steven, thank you for finding the next generation of superstars. Damn, it's not about me at all. We all know the famous old osteopaths and chiropractors and it's great to see that the new blood and new brains are there for the future of our profession.

AC: We're far older than we look.

SB: Thank you. Thank you Andy and Alex, whoever sent that in, that's a very nice comment. Thank you very much.