

Pitfalls of Spinal Assessment

with Bob Chatterjee

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TRANSCRIPT

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Steven Bruce

Today we're going to be doing some CPD which is very, very relevant to all of our practices. I'm joined by Mr. Bob Chatterjee, who is as you can see the chief of spinal surgery at St. John and St. Elizabeth Hospital. He's also the president of the Royal Society of Orthopaedics, a reviewer for the Journal of Bone and Joint Surgery, and he edits Spinal News. Bob, welcome to The Academy. Do you have time for anything else after all those things?

Bob Chatterjee

Very little. I think sometimes my family wonder where on Earth I've gone.

Steven Bruce

I have to say, it's very kind of you to give up your time to be with us. And you're not only all those things, but you lecture internationally as well and perhaps you could give us a little bit of background on yourself, because you've done so much training and you take part in so many different things that I couldn't remember them all.

Bob Chatterjee

Of course, well, I originally trained as an orthopaedic surgeon but as I'm sort of going through my training, spinal surgery itself was changing somewhat. And it became apparent that traditionally, spinal surgeons come from two branches. Some of us come from an orthopaedic background and some has come from a neurosurgical background. But particular last 10 years or so people have felt if you're going to do spines, it should be your sole practice and you should really be educated from both disciplines. And so unfortunately, after we finished orthopaedics or after you finished neurosurgery, you have to switch over and do the other one, it's rather a long time at school. So, I certainly don't accept any complaints from my children when they complain about their homework. So, it's a long, long training period. But the spine is my passion. It's the only thing I've done in the NHS throughout my consultant practice, the only thing I do in private practice, and I spend a lot of time travelling around the world, looking at spines done in different places from sort of Africa, India, China and so forth. And you always find that you got a lot to learn from different cultures and different ways of doing things. So it's absolutely my passion. And it's my pleasure to be here with you today, because teachings a really big thing.

Steven Bruce

Thank you. One thing that occurs to me is that a lot of us will probably be a little bit unclear about what the difference is between neurospinal surgery and orthopaedic spinal surgery.

Bob Chatterjee

So, in the old days, orthopaedic spinal surgeons used to do the back and they would do everything to do with the back in terms of bones and nerves and so forth. And neurosurgeons tended to do to sort of brain and neck area. And they'd sort of meet halfway in the middle. And those are the sort of traditional routes but through the different types of training, if you like, orthopaedic surgeons tend to know a bit more about

bone. So, had you had an accident, for example, and damaged your spine, and you need to reconstruct it, there'd be an awful lot of useful information from there. But equally, neurosurgeons would know how to deal with nerves better. So, when you've got problems with the nerves of the spinal cord, that's absolutely their field and what they're used to dealing with. And that's really why I think as a group of spinal specialists, we came to the agreement that really, we should be doing both, if you want to specialise in spines. So, these days, most of us who've come through in the last decade or so are dually trained.

Steven Bruce

So we've got a slide here, which tells us what you're going to be covering today. Which I think when I look through your slides, I thought it looked particularly interesting, there's a lot of stuff in there, which ought to be revision for all of us, but that's never wasted. But also, some nice little horror stories that hopefully we can avoid in the future.

Bob Chatterjee

Yes, I wanted to talk about a few things, really, I suppose this is less of a lecture, maybe a more a bit of a sort of telling of a journey of mine through spines. When you start off in spine, you sadly think you know it all and as years pass by, you realise you know hardly any of it. And in all practice, I'm afraid we, in a sense, we tend to learn a lot from the mistakes we see and come across and even make at times, and so I really wanted to share some of the experiences. That's the only way you really learn. So I just wanted to give you sort of an unfiltered view of my 15 year career in spines and what I've learned.

Steven Bruce

Okay, so I guess we're gonna start with basic principles and this slide kind of tells us what you want to cover there.

Bob Chatterjee

So, with basic principles, and when I teach my students, it always comes down to the first few things because they're all desperately keen on what I call the fascinating new technology, the imaging and so forth. And when you come out, you're as keen as mustard, of course, you've learned all these skills during your surgical training and you're desperate to let loose on somebody or something. You find, as I've gone through the years, and I do a fair amount of sort of medical legal cases and second opinion cases, usually, it's not that the surgeon has necessarily made a total hash of what he or she has done in terms of their operation. It's more that they've never really understood what the problem was in the first place. So, it always goes back to your first principles, get your detective work right. If you understand the cause of the problem, the rest of it, in some ways, gets a lot easier. It's usually the failure of diagnosis that's the thing that I tend to come across.

Steven Bruce

You make it sound as though understanding the cause of the problem is dead straightforward.

Bob Chatterjee

No, it isn't. And that's the thing, it needs quite a lot of work and effort. And often I find that not enough effort is put towards that, more effort is done into, well, we can do fancy operations or doing this or that. And it doesn't matter how fancy they are won't matter a jot if you haven't understood the cause of the problem. So, I always say that the three basic things really are history, examination, and imaging. And the most important one of that is history. Still. Despite all the fancy technology that we have. I actually generally think probably the audience, your listeners, are probably better at this than we are surgeons, I gotta be honest, and most of my colleagues aren't necessarily people surgeons, if you like, they're very into the sort of technology and the operations and so forth. But actually, you need to be a people person to understand spines. And there are a few pointers that I tend to tell people when going through the history. It's not just about what's kind of got you, why are you here today. You need to understand their whole journey. And I just saw a patient literally, before I started this lecture today and his problems started 18 years ago and you need to go back 18 years ago, okay, you need to understand what was the first thing. Because often you find that small things snowball into big things, little misconceptions or misinterpretations give patients often the wrong ideas. And you need to understand their understanding of their own condition, because you've got to empower them. So, you want to really know where has this problem come from? Is this a problem that's, if you like, the sort of the end of a long process of degeneration? Is this a blip that they've actually been managing perfectly? You need you need to understand a bit of their journey.

Steven Bruce

Is this a problem perhaps in your world, do you think that surgeons perhaps don't do this as well as they should?

Bob Chatterjee

Definitely. It's partly understandable if I can speak from my NHS experiences, you have a very small amount of time per patient. I think when I first came as a consultant, I think I was given about seven and a half minutes per patient. And if anyone can get a detailed history in that time, my hat's off to them, I certainly can't. I tend to find on average, for a new patient, it's somewhere between half an hour to an hour in all honesty. Their problems are complicated and not all surgeons are great sort of talkers and have the time and care to talk to people. But I do think that that's where the biggest problem is, it's not technical ability, it's lack of understanding of people and their problems.

Steven Bruce

Well, we've already had a question come in about history taking, Caroline has asked whether you take a stress inventory as part of your case history?

Bob Chatterjee

Completely. So, you need to understand what triggers their symptoms. So, we tend to talk about the five things, marriage, divorce, changing jobs, exams, and moving house. Just as an example of five factors that you should look at, that often people will exacerbate the symptoms they often have. And that's a critical part, because they may come in absolute agony, but you need to differentiate how much of that is because of the current stresses that are going on in their lives and how much of that is pathology. Because getting rid

of stress, you can do that without doing an intervention, if you like, you just talk to them or psychology or whatever you want to do. If you get rid of the stress, you might find that their symptoms actually settle to a great deal and actually, they don't need any intervention. What brought them to seek attention, if I can just focus on that a little bit. So, I call them hidden anxieties. Don't assume the patient will always tell you why they're here, sometimes it's couched in languages. I had a lady the other day who was sort of telling me about her symptoms, but something wasn't quite right. I was thinking, I know what you're telling me, but why are you here. And then suddenly, after talking to her for a few minutes, it became apparent her sister had died of cancer and it hadn't been spotted, and it started out as a problem of the back. You're only going to get that sort of thing on a detailed history. But if you don't understand that that was one of the trigger points for her to come visit you in the first place today, then you won't be addressing her concerns. And that's absolutely critical. Don't just address the MRI scan, you need to address the patient's problems as they experience it and as they describe it. So just be aware that they won't necessarily volunteer it sometimes you've got to drag it out of them a little bit. I talk about their objectives. And one of the specialties I suppose I'm particularly interested in is older people. So older people's spinal problems and surgery is my particular specialty. Because I remember I did a job some years ago where I felt they were very much just fobbed off really, on the grounds that well, you're 65, what do you expect, off you go. And it's not like that at all. And you shouldn't assume that two 75-year olds are the same, I can show you one who's extremely active and is fitter than me and I can show you one who's on triple oxygen and had a triple bypass or something. So, they're not all the same, try not to bring the age into. And I think that what you need to understand is, what do they want? Where do they need to get to, you need to understand their objectives? So it's a big difference, if someone tells me that they want to run, and that's a big thing for them, then I understand what they need to do, someone else tells me that actually, they're not particularly sporty, they just want to walk more, you've got to understand these different goals, because you need to feed that back into your thinking process in terms of when you're deciding what it is that you'd like to do. So, understanding where they want to get to is as important as understanding where they come from. Now I've put down there, explore incorrect understandings. So, you have to develop a rapport with your patient. And often they'll have a very different idea of something from you. And what you've got to try and do is understand that medical language is often complicated and not well understood and it's a good idea not to speak in it. So, I try to really speak in as plain English as I can. What you're trying to convey is information. And at the end of the day, your job, my job as a doctor or surgeon, is to give patients information so they can decide what they want to do with themselves and their condition. To give them medical gobbledegook gets them absolutely nowhere. The internet, unfortunately, sometimes helps and sometimes doesn't. So, for as many good sites with good quality information. I see quite a bit of scare mongering, particularly the American science. I have to say, I think a lot of them are somewhat commercially guided and that's a big no-no in my book. So, it is worth understanding what they understand by their condition. So sometimes a person will come in, I had one today who said to me, I've got problems at L4, L5. Well, what does that mean? I don't even know what symptoms you're talking about, that sounds to me like you've been reading too much about something or somewhere. So, try to demystify it all, if you like, and get down and speak in plain language that everyone can understand and get an idea of their understanding of it.

Steven Bruce

How do you cope with the patient who comes in and says, Well, I've read on the internet about this, I think I've got this condition, and I need an MRI and you say, Well, actually, the possibility is very, very low that you've got that but they say, Well, I don't care, there's a possibility, I want the MRI or I want this surgery, or whatever?

Bob Chatterjee

So, I've dealt with it in different ways. And when I was on the NHS, I'm afraid I didn't have any choice, because there are strict guidelines and criteria. And if you don't fit the criteria, you're not going to get an MRI scan. Privately, I almost always offer them an MRI scan. My rationale for this really is that sometimes when patients have got that idea in their head, whether the idea is incorrect or not almost doesn't matter. Until you satisfy that idea, you're not actually going to be able to move forward. So many times, on the private side, I've done an MRI scan in my head thinking, I know this is going to be okay and they don't really need it. But they feel they need it and it's a block to them moving on because no matter what other ideas I've introduced, they'd be like, yeah, yeah, but you don't know because you haven't had an MRI scan or something like that. So, I have a fairly low threshold for giving patients what they want on the private side. Because I think that actually you need to treat their psychology as well as their pathology.

Steven Bruce

Do you have the same approach when it comes to actual surgery? You might say, well, there's a such and such a percentage of success with this surgery and they say, well, I definitely want this because it's definitely going to fix me.

Bob Chatterjee

Yeah, that does come into it a little bit. Sometimes in the other way, though. So, for example, I've seen colleagues before, make good cases for surgery, where if you looked at the scan, you'd think, yep, that's reasonable. If you looked at their neurology, you might think that's reasonable. And then you meet the patient and they don't want it or they're terrified of it. And then the first thing you think is no, don't do it. Try very, very, very hard not to go against patient's beliefs, because I can't prove it to you scientifically but over the years, I'll tell you that if someone has made a clear decision that they want particular surgery and you think it's reasonable, then they tend to do well from it. Even if I think it's reasonable as a surgeon, even if I think it's the best thing for them, even if I think it will do all the good in the world, if they don't want it, they usually don't come out with a good result, no matter how well you've technically done the operation. So, I think the patient's mentality has got an awful lot to do with their outcome, even though it isn't really there in the books and the papers. It's true to say sometimes that if patients want surgery, they tend to do very well from it. But you've just got to be a bit careful here because I still think that if you're going to do surgery that there has to be treatable, correctable pathology with a good amount of evidence base behind it that suggests that the operation is a decent thing to do. But yes, I always feel that doctors used to be somewhat paternalistic, you know, you should have this and you shouldn't have done that. And I think that's all old hat, to be honest, I think these days, it's much more about what the patients want. And to some extent provided I think an operation is reasonable, I will offer it to them and if that's what they would prefer, then I don't really have a problem with that.

Steven Bruce

We discussed on a different show, actually, that there's some good evidence, isn't there, that people who are expecting knee surgery, if they had the incision and the incision was immediately sewn up, a lot of them tended to do just as well as those who'd had the real operation.

Bob Chatterjee

Absolutely.

Steven Bruce

Not suggesting that you should do that to your patients without their knowledge, obviously. I like the medical terminology, in your last point, beware of nutters.

Bob Chatterjee

What I meant by that is that over the years, actually, so you're going to get difficult patients some days and some days, you get patients who you just can't make head or tail of and they have no symptoms that make any sense to you. Just saying beware of these patients. Normally, when you see a patient in any of your clinics, you'll talk to them and what they tell you is a very good guide as to what their problems are or aren't. But when you get people who can't give you a coherent history or some people for example, who've got other medical conditions like dementia and so forth and can't explain themselves to you, what you then have is you've got a situation where you've actually got less information to go on than you would normally have got from history. And in those situations, you need to cast your net a bit wider, because you don't have the history to help sift through the possible diagnosis of what you have. So, in these situations actually be more suspicious and don't sort of dismiss them, actually take it more seriously. I've had some weird and wonderful things over the years. I mean, I remember a poor patient who was stuck in a hospital in North London on the NHS roll complaining of something dancing along her spine and neck and everyone thought it was complete nonsense and made absolutely no sense. No one could find any obvious neurology, some well-meaning junior doctor thought well, we better just scan it and found a tumour. She had absolutely no symptoms consistent with anything, no history, none of the textbook signs at all there. And again, the history was misleading. So, I just say that you'll all get these patients at times which exasperate you, don't dismiss them, sometimes they will have things wrong with them, they just can't convey it to you.

Steven Bruce

And does that lead on into this sort of worrying patient profile that you've talked about here?

Bob Chatterjee

So, these are some of the patient profiles that when I see them, I realise that actually I can't tell so easily whether there's anything significantly wrong with them or not. And there are a few things. It's well known that depression, there's good evidence that when a patient's depressed, that is a negative factor in terms of their symptoms. So, you need to know about that. And when they have pain and suffering, what's disproportionate, for example, you may look at the pictures and the scans don't look that bad, but their

symptoms are terrible. And I think someone was mentioning earlier, you need to see what other factors might be exacerbating those symptoms? Are there any other stress factors that might be contributing to the symptoms they have? I'm always a bit worried when people have an overuse of prescribed analgesics, I've had people come in with their own pharmacies before and that's a bit of a worrying sign because the vast majority we actually want to get better without medicines, if they possibly can.

Steven Bruce

Is it an appropriate use or are people often kept on them for longer periods? Is this what you mean, they're kept on them for longer than they need by their GP who just keeps offering repeat prescriptions?

Bob Chatterjee

Yeah, I think, to me, it's a bit of laziness really, in all honesty. I don't like people on repeat prescriptions, because I just think for most people, what you really should be looking for is a long term non-medicinal, non-interventional, self-supporting solution. That's really what you're looking for. You should not be trying to put drugs in your body as a long-term solution. Short term, fair enough. If you're in agony, of course, I'm not saying you should be without analgesia, by all means, get out there. But these repeat prescriptions, I suppose my criticism would be that there seems to be a lack of thought process. What is the plan here? If you're giving someone a repeat prescription of analgesics ad nauseum, you just plan to do this for the next 20 years of their lives? You're going to run into other troubles with them. So I want a clear reason and a thought process as to why an analgesic is prescribed. Which one, what are you treating, and how long are you treating for? I'm not a great fan, when I see people with boxes and boxes of analgesia.

Steven Bruce

Yeah, this is an interesting one, superstitious beliefs about bodily functions.

Bob Chatterjee

It's an interesting one. I've had people from all parts of the world as I said before, when I've travelled around and I've found ideas that people have about their bodily functions. I had a gentleman in just a few months ago, who was explaining that he could alter all his bodily functions due to the amount of sunlight he was going to be receiving and therefore he was exposing parts of his back to sunlight disproportionately and covering up other areas in the view that this would cure his problems. I had people who were injecting themselves with part of their own muscle tissues from their quadriceps, they'd jab themselves in the quadriceps, remove some what they thought was muscle tissue and inject it into areas that were weak. You get some really weird and wonderful things. They don't always volunteer it because I think that sometimes they realise it's a little bit cuckoo. But you just need to, again, on the questioning, just ask them what do you do, how do you manage your symptoms? And if you're nice and friendly enough, they'll often open up and tell you a bit about it. It's not that common a thing, but I've certainly seen a few over the years.

Steven Bruce

How did you fare trying to talk someone out of injecting their quadriceps into wherever their problem was?

Bob Chatterjee

I don't start by telling them that it's rubbish or nonsense, because you know, if you start talking to them in a condescending manner, people just don't respond. And what I would normally say to them is, look, that's not a technique that I understand and recognise, although I'm not claiming that I understand or recognise every single technique in the world. But I would say that the reason you're here is that technique probably isn't working for you. Otherwise, you probably wouldn't have come to see me. So why don't we try something different? And I'll probably steer the conversation in that direction. And failure to work or perform expected activity. It's a pretty big thing about people wanting to work. And I always have that story I tell about the chef who chopped his finger off. And when I told him, it was really good news that his tendon wasn't completely severed and he'd be alright, he was extremely disappointed because this means he wasn't going to get his compensation payment from his workplace. So, you do find these weird ones. So do ask, there's evidence to suggest that if there's compensation and litigation involved, there is always an incentive not to do so well. So, you should just explore that. So, I've seen people often who come for sort of medical reports after various accidents and I'd like to know what do they want to get to. It ties in a bit to their objectives, whether they want to go back to work or whether they're more than happy in sort of an illness or sickness role. So, it's just a thing to pick up in the history.

Steven Bruce

Siobhan has asked a question about your first point, she was taught, there's only a small correlation between physical damage of a structure and pain levels, asymptomatic disc herniation, for example, and she seems to feel that you disagree with that idea.

Bob Chatterjee

No, I agree with that. And I was saying that often you're going to get a disproportion amount of symptoms from the pathology, so what I was saying is when you see something that, for example, it looks small on the disc. I'm not saying that it's impossible that that might be all responsible symptoms. But often there's other factors there that might be contributing to the symptoms. So, I'm just saying that when you see something when you think, well, it doesn't look that bad on the scan, but it looks worse on the patient. You're right to say that it might be the pathology, it doesn't isn't always the case that the bigger the disc looks on the scan, for example, the worse the pain is, that isn't the correlation that's there. But you shouldn't just automatically assume that it's definitely due to that, you should look for other causes as well.

Steven Bruce

So what about abnormal psychometrics? I like the image in the corner there.

Bob Chatterjee

Yeah, I think that was the Beatles. Beatlemania, I think. But I thought it was just really a sort of a follow on from the previous sort of slide really to say that, in terms of the evidence based literature, these are the things that have been brought out in the literature to suggest that there's a definite correlation between these components in their history and that predicts whether they will actually do well or not with surgery. The idea was, if you have any of these particular six factors, your surgical outcome is less. Now if I could just go

into a little bit more detail there. So, when you read a paper, it all sounds very straightforward. But if I could just take one, depression, right in the middle of that. That needs a little bit more investigation. So, there's a great difference between depression because you've had an injury and you've lost your job, I'd be depressed, if that happened. That's what I call reactive and normal depression. So, there's a great difference between that and someone who's had depression for 30 years for other reasons and has been on long term medication. So again, look into it in little bit more detail, why are they depressed and how long has it been there for? Anxiety. I treat a lot of patients with anxiety. And you can't just dismiss it, just because they're anxious doesn't mean their symptoms aren't real. Their symptoms may well be real. It just means that they don't tend to do as well with surgery. So, what it means to me, it's not that I wouldn't operate on someone because at the end of the day, if they've got the pathology and they've got the symptoms and signs that goes with it, then an operation is reasonable. But I would also say it is very rarely black and white, it is usually a grey area. In your head you could kind of go one way or the other depending on what you think. So, when you have anxiety, it makes me little less keen to operate, if I could put it like that. So, these are factors that go into the decision-making pot.

Steven Bruce

Last, we get to examination.

Bob Chatterjee

So, this talk wasn't about a full examination, I was really using this slide as a bit of a talking process. Because the things that everyone does very well is spinal range of movement and spinal neurology, you all know how to examine that and even my students know how to examine that. So, I'm quite happy with that. There are a number of special tests and I'll go through the myelopathy ones in a minute, because those are the ones that tend to be not quite so well known. And everyone's good at palpating spines and areas. But the bit I wanted to focus on really was the last bit on the slide, which is associated areas, the hips and knee. Because the number of times I have seen people about to undergo surgery for a problem that is emanating from elsewhere. So recently, there was a colleague of mine whose mother was about to have three level back surgery. And the problem was in the hip, wasn't in the back at all. And all they needed was a hip replacement and, lo and behold, their back pain disappeared. So just because there's pathology on the scan doesn't mean that it's got anything to do with their symptoms. So particularly for the back, beware of the sacroiliac joint, beware of the hip joints and the knee joints, they can all give you back pain. I had a lady recently complaining about right side back pain that came out of nowhere, then I managed to drag it out of her that she'd actually had a hip replacement done recently, about a year ago, and that had upset her spinal balance, because somehow, they'd lifted her a little bit on one side. So again, just because pain's in the back doesn't necessarily mean that's the area. Classic ones in the neck, for example, are shoulder problems, often you'll get shoulder impingement. It can be very difficult to distinguish sometimes between pain in the shoulder and pain in the neck. They're so geographically close to each other. So, one of the fallacies I've seen over the years, is when people have attributed the wrong part of the body as the cause of someone's symptoms. So, examination, that was the bit that really, I wanted to convey to the audience: beware, we all get into the habit of pattern recognition. Someone gives us a good story, we see something we like on the

neck. That's it, all the brain cells are connected and there's your diagnosis. And we have to constantly question ourselves and check ourselves, because otherwise we'll miss things as we go along.

Steven Bruce

We had a question from Rachel related to what you were just saying, when you were talking about how the MRI may not indicate the true cause of the problem. She says, how do you handle the patient's expectations and stop them catastrophizing, when they are shown that there is a bulge or some other flaw in their MRI?

Bob Chatterjee

Yeah, it's a big problem. There are times I feel the first thing I need to do is surgically detach the MRI scan report from the patient before we go forward. And then I had a patient who came in yesterday. And she said, do I do sacroiliac joint fusion? Wow, what a conversation opener that is. And, of course, she'd had a scan done and the scan suggested that she had problems with some irritation of the sacroiliac joint and one plus one equals 5000. And she kind of got a bit carried away with herself. You need to spend time on that. So, I will explain to them first of all, as I think I may have put later in the talk, that there are a huge amount of people who've got various pathologies on the MRI scan and they're completely asymptomatic. What I teach my students is that the history examination and the MRI scan, they've got to line up. If they line up, then I think there's a good chance that what you're looking at on the MRI scan may be responsible for some of their symptoms, but they often don't line up and therefore it may be a red herring, but it's a big thing detaching the report I go through with them, I tend to translate the report because the report's often gobbledygook as well. So, I tend to translate the report for them into everyday language. And I'll go through the scan with them. And I'll explain to them, as I said I like teaching, I show them scans all the time in terms of what is what. And they can then see the degree of the problems and usually if they go through it in detail with you, they end up believing you that you've got some idea what you're talking about, and they tend to take notice of what you say

Steven Bruce

So, facet syndrome?

Bob Chatterjee

I was just saying put facet syndrome up because I get certainly patients who have absolutely decided they've got sciatica, when usually they haven't. To be honest, I've seen many more problems with the facet joints than I ever see with sciatica so yes, of course you see sciatica again, but I think it's a much less common condition. Of course, patients know a lot about sciatica so they're all self-diagnosing themselves with sciatica. I suppose this was a bit more for my sort of medical students and surgical students because they don't tend to see so much of this but most of the audience, I would hope in private practice do a lot more examination of the facet joints and the lumbar spine and will be more than familiar with facet syndrome. But it was just to reinforce the fact that just because you've got pain in the back, and just because it's coming down towards the back of the knee does not mean it is sciatica, in fact it's rarely the case. Classically as you know, sciatica will most often be buttock and then below to the calf and foot. But that's all I really wanted to say about it.

Steven Bruce

You've written "crouch" at the bottom of your list of points.

Bob Chatterjee

So, we often ask them to crouch. You look for a simple test, I'll ask them to crouch and they often get what we call an extension catch on the way up, so you ask them to crouch and they get up, they start to feel it difficult. They often talk about in their history, they find what we call transitions going from lying to sitting, sitting to standing up, are quite difficult. Once they're up and upright and motoring, it's a little bit easier. So, these are evidences that the problem may be to do with the facets as much as to do with the nerves.

Steven Bruce

Bob, this will intrigue a lot of people, because I think we always worry about the accuracy and the relevance and so on, specificity and sensitivity of the special tests that we've got. Can you run through these for us?

Bob Chatterjee

Yes, of course. So, the first thing to say is you're absolutely right, they aren't very specific. In fact, many people who've got myelopathy, almost have none of the tests. And so, if you're trying to diagnose myelopathy, i.e. pressure on the spinal cord, then it's all in the history, okay? It's all in the history. It's lovely when the special tests confirm what you're thinking, but you don't often get that. Spurling's test is not really a test for myelopathy so much, although some people confuse it as such, it's when you press down on the head and you actually push the head to one side. And when you push the head to the side, it's the nerve on that side that tends to get affected, because its anatomical route becomes a little bit more elongated and you get reproduction of pain coming down the arms. So that's a test of radicular pain. Lhermitte's sign is when you bend your neck forward and when you put your neck forward, what tends to happen is it tends to cause compression on the spinal cord and you get these electric shock signals coming up and down your spine. It's quite scary for the patient. And I have seen patients with it, but it's not a common thing. A wide-based gait is a much more common thing. You'll find, particularly with lower cervical myelopathies, that the neighbours think they're a bit drunk, they're sort of swaying a bit and they've got to put their legs out a bit wider to get steady. And that's a classic sign, that something's not quite right with your gait. So often they'll say that their stability and balance isn't quite right. Hoffman's sign is a sign of hyperreflexia. So when you get cord compression, reflexes are sort of a primitive cord reflexes and so what you often do is you if you take the patient's hand and what you do is you sort of flick the terminal phalanx of the index finger and you get a reflex contraction of the other fingers or middle finger. And that's really a sign of hyperreflexia, you'll see the same sort of thing, when you're doing the reflexes, they all seem terribly, terribly exaggerated. And these, if you like, sort of icing on the cake and they're nice if you get them, it certainly doesn't rule out myelopathy if you don't get them. So really myelopathy is something that you'll come across in the history and look to be confirming with an MRI scan.

Steven Bruce

I'm worried about asking questions, because we've only got a quarter of an hour left, but several people have asked whether you can clarify about facet joint pain, because you said it's worse sitting than standing. And they're asking, do you mean that it's worse when they're moving between the two positions?

Bob Chatterjee

Yes. So, with facet joint pain, typically when they're walking it's not so bad. And it's usually a problem that if they sit for any length of time, and there has to be a length of time, so they sometimes tend to get it after half an hour or an hour or so. And then it's when they change position. So, when they change position when they go from a sitting to a standing, that's when they feel it. Or if they've been lying down, they get up often first thing in the morning, they'll often find it stiff and sore. So, it's a change of position, because that's where the facet joints are involved in, they're involved in flexion and extension of your spine. Once you're upright, actually you're moving about, you don't do so much flexion-extension is more the muscles of your hips that takes over so it's not such a problem walking.

Steven Bruce

This is probably one that worries all osteopaths and chiropractors at some stage in their career, if not throughout their careers, are we going to miss a prolapsed disc?

Bob Chatterjee

Usually, fortunately, it's not so much of a problem. Most prolapsed discs get better by themselves. So, if you're going to miss something, it's probably not a bad thing to do. I put this in because you're all in busy clinics and you don't really have time to do all the classical neurological tests that we all got taught in medical school. So, we ask you to do some simple things. I find the slump test quite easy. That's the one that's been demonstrated there where they're sitting forward and they're sort of bending their posture forward, that really stretches the old sciatic nerve out. What you're looking for however, is a reproduction of the symptoms, okay? Because a lot of patients will have tight hamstrings, you're always going to get muscle pain, so it feels a bit tight at the back of the buttock and the thigh. That's not a positive test. What you're looking for is reproduction of symptoms, so often, if you think they've got a prolapsed disc they're going to get some degree of tingling or shooting pain coming down into the lower leg, you're looking to see that that gets reproduced, and if that gets triggered is that's a positive test. Here walking on tiptoes is a very easy way of testing nerves. So, the common nerves that tend to get affected in the lumbar spine are L5 and S1. So, when you're heel walking, that's forcing you to dorsiflex your ankle, and that's a test of L five. And when you're tiptoe walking, that's pressing down and that's testing S1. And crouching usually tests your quadriceps. So, if you're looking for the common nerves to get affected, if you heel walk, you've tested L5, if you tiptoe walk, you've tested S1, if you've done a crouch, then you know that the L3 and L4 the quadriceps is broadly speaking okay. These aren't going to pick up subtle differences. But I suppose from the point of view of surgery, you almost never operate for subtle differences, what you really want to know are their functional problems. You always remind your students that at the end of the day, the severity of the scans don't really matter much. What matters is their functional quality of life, if they can do these things, even if the disc looks big and the nerve looks horrible, I'm happy with that, because they can do what they need to do. So, these functional tests, we find a bit more useful than the sort of more didactic classical neurological

tests. So, pitfalls of imaging I wanted to talk about. So, x rays are often the first thing that are done. And so traditionally, they used to be the first thing that were done, but actually, we almost don't bother with them in spinal units up and down the country. One of the things that I would say is, if you're going to do an X ray, what can you find? Well, sometimes you're doing it looking for alignment, and that's absolutely fine. Sometimes you do you're looking for a fracture, it's not the most sensitive way to find a fracture, but it's probably not a bad start, if that's what you've got for. One thing it isn't good at is spotting cancers. But what you look for, if you're going to look for a cancer, is that most of the time, if you get a cancer in the spine, it goes to specific areas, it doesn't go randomly in the spine, and the area it typically goes to the pedicle. And if you look on the diagram, I put it in the blue shadow, those are the pedicles. They look like owl eyes, if you like, right there. And so, if you look at the level above, you'll see that the owl eye is missing on the left-hand side, where the red arrow is. And that is an indication of metastatic cancer or much more rarely a primary concern in the pedicle. So, it's always worth doing, you may be looking for other things, but it's always worth to just doing a sort of a eyeline check, just going down the pedicles to make sure you can see them all. Sadly, you know, if you're looking for cancer, unfortunately for a cancer to get to the stage where it's eaten away enough of a bone that you might actually see it on an X ray, the cancer needs to eat a good 30 to 40% of the cortex. And with most cancer, sadly, early detection is really what you're after. So unfortunately, if you see it on an X ray, it often means you're too late, I'm afraid so you would never look to look for cancer by X ray. That's not going to pick up the early signs. But you know, if you're doing one for other reasons, it's well worth looking at. If I can move on to MRI scans. Now, MRI scans, I think someone already mentioned are the best source of information and the biggest bugbear that we have. Because MRI scans do not tell you what is wrong. Okay, that's a fundamental thing I tell my students again and again and again. They're there to give you an idea of what is going on. But you have to work with it and the patient's examination history before you truly understand. Unfortunately, with sort of years of cost cutting, there are quite a few hospitals that are doing less than full scans. And when I mean scan as appropriate, I mean two things. So one is that you ought to have a full set of images, as I put at the bottom of the slide, because different images will give you different ideas of what's going on and help you look for different pathologies with the spine. But also make sure you scan the right bit. Because they don't always do that, surprisingly. Sometimes if you've got a patient who's got a pain in a particular area, ask the radiologist to put a little olive oil capsule on them before they go into the scanner. So, you can actually correlate with the area that they're talking about when you actually look at the scan. If someone's had previous surgery, just please bear in mind that a usual MRI scan is of no use whatsoever. And the reason for that is that when you have surgery, you're going to get scar tissue inside and scar tissue looks exactly the same as disk. If you look at the upper of the two pictures on the right-hand side, you'll see that there's a black area just above and to the left of the spinal cord, which in most scans would look like a prolapsed disc. But actually, this patient's had surgery and if you look at the contrast going on the picture below that, actually you can see the highlighted white signal around the nerve root. Scar tissue is very vascular and when you give a contrast, the contrast goes into the circulation highlights everything that is there that has got lots of blood vessels in it. Disc as you know doesn't have blood vessels in it. So when it highlights up it means it's scar tissue. So, if they've had surgery, just be aware that a regular scan's not much use, you need a contrast enhanced scan. Look to see who's done your report. Now, this is always a bit controversial and I promise you that I've got lots of good friends who are radiologists, I love radiologists, okay, but often they've not got a clue what they're talking about when it

comes to scans in the spine. So, we may not get to it today sadly, because of the time, I was going to show you a long list of missed diagnoses on scans, every single one of them missed by the radiologists. It's not their fault. Often, they're done overseas, my own NHS Trust, outsource all the radiology reports and I'm afraid you get to know who they are. And once you've seen, you know, we see 60-70 scans a week, and you see the cut and paste that goes on. So, let's put it this way: forget about me, there's not a single specialist up and down the country who would ever base anything on a report when it comes to MRI scans. That doesn't help you in terms of the audience very much, except to say for this. I'm a real believer that when you guys, you've seen patients for years and years and years, you get what I call your spidey sense, your sixth sense of when things are right and when things are wrong. Trust your judgement, believe me, it's often more right than wrong. And sometimes if you look at the scan, and it doesn't add up with what you're saying, trust your judgement, if you think something's not right and it isn't, get somebody else to have a look at it or get another scan or whatever. I'm telling you more often than not, you'll be really glad that you did. But the reports themselves don't mean much to us. I can't do anything based on the report. I wouldn't base anything on that. So, whenever I need to see it, I need to see the pictures themselves. So, we always look to see who's reported it and we'll always look to see the pictures. And there are many, many things that are routinely missed.

Steven Bruce

Bob, given the time, I wonder if you could jump ahead slightly because as a sort of a warmer for this presentation, I sent out the infographic that's part of your presentation to everybody yesterday and recommended people go to Dr. Linda Dykes' site to look at the things that she has on offer there. Cauda equina has been a little bit topical in our circles just recently. Could we go ahead and get about that just for a few minutes before we close.

Bob Chatterjee

So, a few things about cauda equina. So, first of all, it is a clinical diagnosis, not a radiological one. And again, history and examination are the key things. Usually, the first sign of severe trouble is either problems with a urinary system or problems with the sensation. So, although there's a long list of bits and pieces on the slide I've detailed for you now, I've actually got a few other slides that you might you might want to take home for your clinics.

Steven Bruce

If you're happy, I've put these together as a presentation, which I'll send out to everybody afterwards.

Bob Chatterjee

Please do. Because I put some slides in deliberately for you that you can sort of put up in places. But what you're looking for is the patients don't know that they need to empty their bladder, so they're sort of standing and suddenly pee's coming down their legs or whatever. So, it's not that they need to go quite often. Actually, that's not a bad thing, because at least they know they need to go. It's the not knowing they need to go usually is the first sign that you tend to get. Inability to control it often comes a little bit later. And sadly, loss of full bladder sensation, that's often when it is too late. So usually it's that sort of feeling that you

just didn't know when you need to go in the bladder, that is often the first sign. Bowel functions come a little later. Often when you get to the stage where your bowel's in trouble, I'm afraid is usually too late. They make get sciatica bilaterally. And when it get sciatic bilaterally again, often they start off with a large disc prolapse and it hits the nerves on both sides and therefore they get sciatica down both sides. Saddle numbness and so forth. Those are the areas that you sit on, if you like, and then you often ask them if you're doing a video or remote consultation, whether they can feel anything between their anus and their genitalia. But let me say this to about cauda equina: as a consultant in the NHS I expect to be referred lots and lots and lots of patients with query cauda equina who don't have it. Okay, that is what I expect. So, I always sort of say to people, if you're worried send it because otherwise if that's that one, you miss it, it's a disaster. So, I'm expecting 15 times out of 16 that the patients you said interview won't have cauda equina and that's fine, absolutely fine. Because that is what we should be seeing. We should be seeing lots of negatives because people will have these symptoms. They aren't very super specific symptoms. They are a little bit on the vague side. So, if you're worried about it, please send it in. We will never get cross with you for sending it because we're expecting you to. It would be a worry for us if we were only ever seeing cauda equina when you refer it into us. But that I would say that the three signs that really, amongst all of these things that you look at saddle numbness, loss of the feeling that you know that you need to pass water and the bilateral sciatica, I'd say probably are the three most important. Can I just, if it's alright, there was a slide there with a spinal stenosis. I just wanted to say something because often you guys will see a lot of scans. And if you look at that scan, this is a lateral side view of the spine and you can see the spinal cord coming down the middle and then you clearly see there's a blockage of the L4, L5 level, okay. And one of the questions I often get is what is the difference between spinal stenosis, where there's significant compression of the spinal cord, and cauda equina? Because on the scan, they look the same, you look at that you think that could be cauda equina, it could be spinal stenosis. Which goes back to what I was saying, that cauda equina syndrome is a clinical diagnosis, not a radiological one. The difference between the two conditions is time. Spinal stenosis is something that happens over the years and as it sort of gradually worsens and worsens and the spinal cord gets more and more compressed, the body has time to react to that and because the body's got time to react that you don't get the symptoms of cauda equina. So if you can squash the spinal cord, albeit slowly, to an eighth of its normal size, you still may not get any symptoms. Cauda equina is when suddenly you get a massive disc bulge that comes out from nowhere, hits the spinal cord and it's seeing stars, that's when you get the classical symptoms of a bilateral sciatica, saddle anaesthesia and urinary loss of sensation. So, on the scans, they look the same. So it always comes down to a clinical diagnosis, you must unfortunately, or if you don't want to then get one of us to do it if it's necessary, but we'll say to the medical students, if you do not put the finger up the bottom to test their anal tone and sensation, that is a medically negligent event. And that has been shown in many, many, many legal cases going on. So, we always say don't spare the finger. That may not be for you, you may not be comfortable with that, and we will happily do it for you. But you must test them. If you're looking for it.

Steven Bruce

Bob, I always thank people like yourself for giving up their time for these shows. And I'm really sorry, we haven't had time to cover everything that you had on there. But I did notice on one of the later slides, you are inviting people to send people to you at 2:30 in the morning, if they suspect cauda equina syndrome.

Bob Chatterjee

I mean that. It's the only thing I'll get out of bed at 2:30 in the morning for. The reason for that is that time is critical. The clock starts when when the urinary symptoms start, that's when your clock starts. Okay? And although you can look at the studies, if you take it take a straw poll from spinal surgeons across the country, if you had cauda equinas, a spinal surgeon, which one of us would be happy to wait for 24 hours before their surgery? This was put up in our recent British Association of Spinal Surgery meeting last year in Brighton. And there wasn't a single hand that went up in the audience of 450 spinal surgeons. And that goes to shows, forget the studies, we all know the quicker you do it, the much better the outcome is. So, if they've got cauda equinas, I will operate at 2:30 in the morning because it's a life saver.

Steven Bruce

One very quick last question and this is the relevant case that I was thinking of when I mentioned this earlier on, Robin has asked whether you would refer for suspected cauda equina problem if there were bladder symptoms, but they were intermittent and the last one was only a week ago?

Bob Chatterjee

I would prefer from it. But if the cauda equina started a week ago, it's probably too late to get anything. When they've got incomplete symptoms, there was an old classification called cauda equina incomplete, and when it's incomplete, you think there's something worth preserving. So you may stop it getting worse, you may not necessarily make it better. So, the answer is yes, I would like you to refer it.

Steven Bruce

Robin said that there's symptoms of being unaware of bladder fullness and loss of control and it's happened three times but the most recent one was a week ago. This is just following a fall down seven steps in a flight, I believe.

Bob Chatterjee

So I will say that definitely needs a referral and a scan. I will say the urgency isn't there because it's already happened a week ago and therefore usually if you're going to do something about it, you've got to do it within 48 hours. But the urgency is not there. But that's positive neurology after a traumatic event, I think that needs referral and looking at.

Steven Bruce

Thank you for that. And when we were discussing this before, I also had the discussion with Robin, it seemed to me that once you've written possible cauda equinas syndrome in your notes, you jolly well better refer them because otherwise that medicolegal problem might come back to bite you in the future.

Bob Chatterjee

Completely. If you're noting that in your records, then the next question will be, why didn't you act on it? And so, in a funny kind of way, that's our job. Our job is to take that nonsense off you. We may not like it,

but that's our job, you know? And we pay a fortune for our indemnities, we must get some good value out of it. So please burden us with that. That's our job.

Steven Bruce

Bob, thank you so much for your time. Would you be prepared perhaps to come back and finish off the presentation at some future date?

Bob Chatterjee

Yes, of course I would. I'd be delighted.

Steven Bruce

Brilliant. Thank you. Well, we'll let you go for now.