Academy of PHYSICAL MEDICINE

Transcript

Cased Based Orthopaedics With Nick Birch

Steven: What we're doing this evening for the first time, it's a bit scary for us, is that we're joining that MDT CPD team and here we are live from Milton College, and Nick is going to start with some show and tell I believe, Nick. Nick over to you, I get to sit back this evening, while you do all the talking, which is fantastic.

Nick: Thanks Steven. Yeah so what you've got in front of you is the UK's first non iodinizing radiation bone density assessment system. So this is about bone health, and it comes from Italy, it's called the Echo Light System. What we use is an ultrasound probe in combination with radio frequency measurement and that tells us what peoples bone density is.

So bone health is what we're interested in, which is about prevention, it's about treatment. But we can use this on anybody over the age of 20. These are the scans that you get and this is Sarah's scan, who's sitting in the audience. Pilates instructor from Coventry and she and I know each other 'cause I operated on her about eight years ago. She's been keeping her bone health in good shape. She had immediate results, so if you've ever had somebody who had DEXA scan whose then gone to have a scan and waited three weeks to get the results, that is gone now. That doesn't happen, so we get the immediate results, and you can see here that you've got the T score, which is the green bit, that's perfect bone health of Sarah's hip and here in her spine. Then the yellow part is osteopenia relative bone, but loss in red is osteoporosis.

So we can then guide people in terms of lifestyle and diet. Brand new service, we're rolling it out, launching next week. The website goes live and we're very excited, so thanks very much for giving me the opportunity to present it.

Speaker 1: How much does it cost Nick?

Nick: Total investment to set up one of these is £50,000, so the machine itself is about 35,000 then by the time you've done the training, been to Italy to get

trained up and then done all the training back here and getting everything together it's about 50k as an investment.

Speaker 1: In terms of the investment how much does that compare with DEXA? Is it cheaper or?

Nick: Well DEXA scan you can get for £30,000 for a bit of kit. But then you have to have the space, which is a big space. This is portable, so we'll take this out to Pilates clinics and we'll scan people in a Pilates studio. We're going down to Worcestershire County cricket club on Sunday, we're going to scan a whole bunch of fast bowlers down there. There's a case later on in the MDT of a fast bowler from Gloucestershire who's got some changes in his bone density, which we'll talk about. So with DEXA you need the machine, 30,000. You need an operator who has to be radiologically trained, so that costs whatever it is, 30,000 a year. Then you've got to have a faraday cage, you have to fit a screen for the x-rays. A physicist has to come in every year to check the machine, make sure that it's still calibrated properly. So actually this is cheaper in terms of the investment.

Once you've done all the scans to pay back the investment there rest of it then is margin. So actually it makes a lot of sense, and we need to scan five or six people per week to make it cost effective.

Speaker 1: We can expect to see it in the NHS when?

Nick: I think that depends, it depends upon a lot of things but primarily upon the politics of vested interests. So people go out and spend £50,000 to get something when they've already got a DEXA machine, why would they want to do that? Why would we want to roll out a service of preventative medicine, where we are to have a machine that then allows a few people to be scanned but the rest of the population can go and whistle basically. 'Cause that's the situation we have around this area, East Midlands is very poorly served in terms of bone health provision. So we see this as an opportunity then to actually roll us out to a lot of people who wouldn't get bone assessments through the NHS. It'd be lovely if we could say to the NHS come and send just your patients, we'll do it for the CCG tariff price, that'd be great. We'll see what happens.

Speaker 1: Thank you.

Nick: So right, the first case, and Claire do you want to talk about, this is cancer.

Claire: Yes. Indeed, so Justine-

Nick: I'm just going to move the screen for a second and just I'll come back in a second.

Claire: Do you want me to keep talking?

Nick: Yeah, go ahead.

Claire: So she's late 40s, turns 50 tomorrow in fact. She's been a patient of mine for many, many years. Initially fairly irregularly, she'd come in when she had a problem. But nothing more than that, and then the next pain started to get more frequent. She took up Keiser training some years ago and then she started-

Nick: What's Keiser training?

Claire: It's, I think they sort of market it as specialist physio or PT training. Very, very popular and fashionable in North London a few years ago. It's based on the fact that you should be lifting heavy weights, I think this is right, don't quote me on this. That you should be lifting them for the count of four, holding for the count of two and releasing them for the count of four. Rather than doing high reps, and they have lots of ... They have a doctor who assesses you first of all, you go through this rigorous medical assessment. She found it useful for a while, I think part of the marketing was also that it made you more beautiful.

Nick: Okay, maybe I-

Steven: Nick's been going for years.

Nick: Yeah.

Claire: Anyway she eventually, she then did a kind of a tour of therapists and after each stint would come back to me. I'm not saying that, that's because I was fabulous, I think it was just that-

Nick: Don't undersell yourself.

Claire: Thank you. I think it was that I realized the degree of damage that was going on. Most of the others I think the less medical practitioners I think just kept wriggling things around, and poking it. Anyway, she was then told that she probably needs surgery after having the MRI scans, at which point I said, I think you need a second opinion on this. She is very highly strung, she's very, very highly driven to achieve. Then as a result gets very, very highly strung, frustrated with not being able to do what she wants to do.

Nick: Yeah she's a lovely lady, she's a chef tutor.

Claire: Yeah.

Nick: Obviously running around North London to very rich people and doing stuff in their kitchens. Yeah, she's run off her feet isn't she? She's got kids who are at university I think?

Claire: Yeah.

Nick: They're quite high maintenance as well. The thing that struck me when I saw her was that one is that she had really quite a lot of horrible left arm pain. So just going back to my notes, so she had a lot of treatment, injections, medication, osteopathy, Pilates, mobility treatment et cetera. Been treated by you Claire, but then 'cause you abandoned her by moving to North Hampton from London, so anyway. Pain in the necks present most of the time, can improve with therapy, pain to the left arm going as far as the thumb and the index finger. So suggesting C6 maybe a bit of C7. There most of the time, bit better with Naproxen co-codamol, not much in the way of neurological symptoms. She'd never been tried on Amitriptyline or Gabapentin, she'd never been offered home based traction for her neck, which is sort of one of the things I over the years have sort of seen people who have very much this sort of compressive pattern of radiculopathy. That if you get them on traction and they can sit there with 14 or 15 pounds for 15, 20 minutes it often gives them a huge amount of benefit.

So she'd gone down this route of therapy, injections and then seen two neurosurgeons. Both neurosurgeons had said the same thing. So let's have a

look at her scans, and what she's got here on the left side is the midsagittal view. So the first thing you see on the cervical spine scan is that she's lost her [normal low dosis 00:08:38] the reason for that is here, so that's number two, three, four, five. Five, six, C56 and C67 really quite degenerate disks. Bulging backwards towards the spinal cord, but the spinal cord has got plenty of fluid around it, this white signal around that, that's the CSF around the spinal cord. But if we move across just to the left side, what I've done here is I've actually measured the disk's height, so you can see the relative reduction of disk height. So this one here is a normal looking disk, that's 5.6mm but here it's down to 3.9, there it's down to 4.5. So it's quite a big loss of disk height. If we go across one more, can you see those nasty little osteophyte disk complexes, you're not going to get better with doing some nothing with that. You've got to do something for those.

They're just going to stick in the nerve and just give you the radiculopathy that she has. Of course then the faucets of the back are going to be horribly irritated and inflamed. That gives her the constant neck pain as well as the disk pain. So when we look at the cross sectional views, the axial views then that's what you've got here. If we just flip up to the top. Now for those who haven't been to an NDT before, with all cross sectional imagining by convention is taking looking up towards the head.

Nick: ...by convention is taking a look up towards the head. So, this is the left side, that's the right side. So, Justina has left-sided pain. Here is your spinal cord surrounded by the bright signal of the CSF. That's the disc at the front, disc and bone, this is the facet towards the back, and they've got all the muscles in the back of the neck here, which are not in bad shape, actually. So, she managed to keep her muscles in pretty good shape. Often we see people who have a lot of wasted muscles when they've got chronic neck pain, same as chronic back pain.

But, if we come down from the normal-looking disc, down to the abnormal ones. Can you see here? This stuff there, that the nerve coming out through there is tighter. That's the right side nerve, which is really free, and this is the left side nerve which is irritated. Then, there's this big, massive disc material pushing back towards the spinal cord which is deviated. Then we come down to the next level, again, we see that bulging disc and [osteophite 00:10:55] there, really compressing the nerve root in the frame. Then here it is, just going down there. So, you see now that the cursor has shown you where that is. You see where it is, just there. That's what that is. Coming down below that then it clears up.

So, two level, cervico-symptomatic, cervico degenerative change. And, one thing that occurred to me that she was terrified. Just terrified of the surgeons that she'd seen. Well, terrified of one surgeon, and not so terrified of the other. She asked me what I would do, and I said, "Well, if you can look the surgeon in the eye, and if you trust him, then that's fine, you can believe what he says. If he's a bit of a cold fish, then you're probably not going to have much fun. Particularly if things don't go quite as you planned at the time of surgery. Because you want someone who's on your side."

But, I suggested for instance and said, "Well, why don't you just try to manage it?" Because she wasn't sleeping, "And try a bit of neck traction?" So what happened?

Claire: She ... It's interesting. The conversation we had immediately afterwards, was she had dropped her adrenaline levels massively. Bear in mind, I haven't seen her for six years now. So, I haven't realized quite how frightened she

had become. When I spoke to her on the phone this morning. She has started doing the traction. She's been doing that for about two weeks. She says it's comfortable. It took her a while to get the hang of using the contraption. She says she feels it's making a difference. She also said the Amitriptyline has made a massive difference to her sleep. And she's ... The biggest thing I noticed in the conversation with her was that she says she just feels so much happier, and so much more confident, that she doesn't need surgery yet.

Nick: Yeah.

Claire: And if it comes to having, needing surgery, she can then choose to go down that route. But at the moment she feels really happy going down the route that she's going down.

Nick: Great.

Claire: She felt so reassured by what you said.

Nick: Well, that's super.

What you said to me earlier on that was that she recognizes ... Because she's got a son who's got autism, stroke, ADHD, who's usually stressful when he comes home from university. She realizes actually, that she's got to wait until she gets through that stress.

I think we all recognize that, don't we, in our practices? That you've got someone who's really stressed out. Their sematic symptoms are gonna be magnified. I see that all the time when ... You guys see it all the time, we now recognize it. We talked about lots at this meeting.

You might not be able to see, this is the sort of halter traction system that you get off Amazon. Basically, it's a strap under the chin, a strap under the [inaudible 00:13:56], a bag of water, and then you slip your two pulleys over a door. I usually tell them to start at eight pounds. So, there's eight pounds of water, about 10 minutes. Which is fine, once or twice a day. Going up by a pound or two, until they get comfortable, until it starts to lift the head up and get some traction there.

The cheap on on Amazon costs you 30 quid. Sometimes less. So, if it doesn't work, it doesn't matter does it. It's hardly anything to worry about throwing away.

But, I think, in selected cases, particularly when you've got neck pain, good going radiculopathy, traction is not bad. It's a bit like ... Who does the disc distraction? There was a thing in the Daily Mail yesterday that was pointed out to me on page 45. Did you read [crosstalk 00:14:44]-

Claire: IDD?

Nick: IDD, yeah. Intervertebral Disc Distraction. You strap people in and you pull them apart with their pelvis and abdomen. The Daily Mail reporter was saying how wonderful it was.

The problem with that, was that she said they need to have 18 sessions. And each session cost £75, and on top of that, she needs to have six, or eight weeks of physiotherapy afterwards.

When IDD first came out in The States, they had a great big machine called a DRX9000. They charged $100 per session, run by chiropractors. They always have got a very, very good eye for the business. It was run as a business, they said you have to have 30 sessions on consecutive days, so that's $3,000. That will cure your discs.

Speaker 2: In defense of many of my viewers, some chiropractors, particularly in America, have a particularly keen eye for business.

Nick: They were, this was in Florida. They had a very good eye for business. Basically, summed up, my worry about that was, of course, that if you have somebody who comes with acute L5 S1 disc that's soft, and you see it's a light signal on an MRI scan, the chance of that getting significantly better in the next 30 days could be as high as 75 or 80%. So, if you're treating something that's gonna have a natural history, that's benign anyway, it's an interesting one.

But, anyway the DRX9000, I don't think it's ... It didn't make the grade, and it didn't continue.

The other thing, of course, is that she's young. She's only 49. So the question is, when you do do surgery, if she comes to surgery, and she's been told that if she has surgery, that'll it'll be a disc replacement at both levels, which is now the standard of care, which is fine. But, she might avoid it. We see people who've got really tight stenosis, and you think, "Well, how on earth does the nerve survive in there?" But, if it's actually, if it's come on slowly, the nerve adapts, and they don't seem to have a lot of problem, and they can manage it.

Of course, eventually what happens is those discs fuse up. So, when the disc fuses up, it doesn't matter that the nerve is a bit tight, it's basically, it's just happy in where it is, and it does what it wants to do. So, I hope that if she can get some stability there, naturally, that she might actually avoid surgery in the end.

Claire: To be honest, I think that the Amitriptyline and the traction are making a big difference. But, on top of that, I really do think one of the reasons she always ended up back on my couch was because I kept saying, "You're life is so difficult at the moment, that everything is just making it harder for you to get better." What you said to her was, "Surgery doesn't have to happen, you could go for it. But, it doesn't look like it has to happen right now. Go and try these things." And she was suddenly given an option that she didn't have before, to just get on with her life.

Nick: Yeah.

Anybody got any other things to try? Persistent neck pain?

Sarah, come one, what is the Pilates approach to this?

Speaker 3: Very careful. Very careful. Especially if they bring the MRIs in, then we're very, very cautious, and we do push people back to the medical practitioners.

Nick: In terms of the osteopathic approach? If you've got som:one who's got neck pain, and radiculopathy, with a little bit of soft [durology 00:18:11], are you going to be doing some thrusts and manipulations and rotations? Or are you gonna say-

Claire: I'll whack it! Totally.

Speaker 4: Lots of traction. Generalization, that sort of thing.

Claire: But if you've seen the MRI scan, and you know that above and below is safe to manipulate, then-

Speaker 2: Particularly with minimal-

Claire: [crosstalk 00:18:32].

Speaker 2: ...huge rotation of the neck. It's just tiny movement.

Nick: Yeah, there's a lot of little movements, yeah. Yeah. Okay.

Claire: But, it's interesting. She's working with a physio at the moment who's really working on their [inaudible 00:18:44] or [mastoid 00:18:44], and getting, I think, some really good results with that. And I think the physio is talking to her Pilates teacher. I have to admit, I don't know what you do as a Pilates teacher, when you've got to be that careful. So...

Speaker 3: We are quite limited.

Speaker 4: You look at posture, wouldn't you? And once you've looked at the MRI scan, and you see what you've got, then, the only other main this is looking at posture and trying to agitate her about maintaining correct posture to try and get that-

Nick: But, the problem if you get that kind of issue corrected, is that she's going to close her [inaudible 00:19:21] now isn't she? So, part of the benefit of that [inaudible 00:19:24], is that it gives you some distraction of the flame, and it takes some pressure of the nerve. So, I think that posture correction's okay. But, what I would suggest, is it actually should be cervicothoracic, and not the cervico. Because, here, if you go to the up slightly, C2-3, C3-4, C4-5, they're all fine. But she's kind of fussy there isn't she? So, if you could leave that little kyphotic segment alone, and then concentrate on the upper bit, if you get everything up there, then she has a better posture here.

What's interesting is if you look at her cross sectional video, just put that in single, these are the [inaudible 00:20:01] here. They're pretty good. So she-

Nick: These are the center mastoids here. They're pretty good. So, she's starting from a good base, and if you look at all her posterior muscles here, all the extensors, they're great. What she hasn't got, these are the anterior cervical flexors there, and they're not great. So I think it's anterior core stuff here, which has been reduced because of actually those two discs have [Gones 00:20:23] Kyphosis and that's de-functioned the anterior strap muscles.

Speaker 5: What would you do? Physios?

Nick: Michelle.

Bernie: [crosstalk 00:20:30] tiniest, most subtle.

Michelle: I'd do the Alexander. When you put the book in the back? And the thing, and just get it to stretch into that position, just that, just use that as a self-traction.

Nick: Right.

Bernie: Just one step, just almost like the smallest little nod, but without bringing all your superficial muscles into play, so you just keep it very subtle, very subtle.

Speaker 5: So I would have overdone that if I'd given her that exercise. [crosstalk 00:20:55]

Nick: Say that again.

Bernie: Think seahorse.

Nick: I'm thinking [inaudible 00:21:02]. When you got to rotate re-subluxation C2 and C3.

Speaker 5: So she's stressed and scared so she won't be able to do some of the things.

Nick: Yeah, that's absolutely right.

Speaker 5: She be able to protection.

Nick: She's got massive sympathetic drive. The adrenaline that's doing that. Of course, that means that when she's coming back to Claire, she failed the treatment, because she never relaxed enough; to allow the treatment to get over threshold. Whereby she would then be able to benefit.

[crosstalk 00:21:33] Be very aware of that.

Anything to add Chris?

Chris: No. I'd be the same as [Shelly 00:21:41]. Just doing very simple [crosstalk 00:21:46].

Bernie: Sometimes if she gets in acute arm pain. Strap it, take the nerve root off for a short period of time, for a second, cause she obviously have episodes when she just stirs.

Nick: C6 to C7 are actually particularly light then. When I tell a patient once who came in with his arm like this. I said, “Well how'd you sleep?”. He said “It's okay. I've got bandage and I tie my arm to the bedstead, and I sleep like this and I'm comfortable. It's okay. But as soon in the morning, I take it off.” Oh god.

We'll talk about...

Speaker 5: That's really helpful.

Nick: We'll talk about her again. I think those little deep flexors. That would be really good. I like the idea that she's working on all the external muscles to sort of bridge everything up, and keep her in that good shape.

Try to make sure that posture side of things is above and below the segment that's affected; and not affect, you want to keep those facets joints opened up a bit.

It'll be interesting to see how she gets on.

Speaker 5: Thank you.

Nick: You can report back in due course.

Seb: Why don't we switch over. [inaudible 00:22:46] raise an admin point. Even the fuss that we've made about it in the past, there will possibly be people watching us thinking, GDPR. We just identified our last patient by first name, last name, and birthday. She did gives us her full permission to share that information.

Speaker 5: She did.

Seb: But if anyone else wants to talk about a patient, just be aware if you give us that information. It's going out live at the moment.

Nick: So [Seb 00:23:05] I know the GDPR is obviously very important. We are Compliant and so we have actually explained to all the patients that we're presenting today.

One of the things that's not happening, I hope because the boys who are in control of this, is that our audience are not seeing the screen right now; because it's got some text on it, and that needs to be edited out of the video, and later on for the recording, which is fine.

Let's get on to [Anna Mays 00:23:30]. Unfortunately we don't have any MRI scans. [Benny 00:23:37] brought the MRI, we can't open it, and we tried very hard. I eventually had to find, I had to borrow somebody else's laptop when Anna came to admit. A right pfaf but anyway, we did eventually, but that's fine. But we're talk about her presentation.

Bernie: Anna is a 37 year old teacher. She's an assistant teacher, head teacher of the school; a secondary school. Who has been having back pain for a number of years, on and off; but attributes this back pain, which started worse in about July-August to when she was doing lots of marking.

She describes the pain as being on for many years, but since the beginning of July, was not able to sit down. She had radiating pain into her right buttock down the lateral side of the leg, and into the lateral side of her foot, which she described the numbness into her foot was constant. The lateral leg pain and the buttock pain was there with sitting. Immediately she sat down, she got the pain, and was relieved by walking around.

This was ongoing. She had problems with her butt intermittently in the past. She's had three children, quite close together, in pregnancy. They were all under the age they were now. 7, 6, and 4, I think, 5? They're quite close together, the children, and had no problems in pregnancy. In her past medical history nothing very relevant apart from she had anorexia, in her past.

Nick: She didn't admit that to me.

Bernie: She admitted that to me, so yes. She admitted that one to me. Anorexia in the past. She described the pain as being worse in the morning, not sleeping at night at all; but got better in the day she got moving around. She hadn't been taking any medication despite her husband who was trying to insist that she did; but she just wasn't taking anything at all for the pain.

Nick: Just as an interrupt there. She's not dissimilar to the last patient, in the sense that she's a highly strong, very busy, very competent, Type A personality whose running around doing lots and lots of stuff. She doesn't want to not be doing that stuff. Most important thing she said to me was, “I couldn't be there”, whatever it is, the 3rd of September; “because that's when school starts”. She couldn't sit down. She was just disabled.

Bernie: I was going to say, I saw her the day before she was going to France on holiday, driving. They were driving to France, and that wasn't not going to happen. She was going, regardless. She just came in. When she got undressed, she's quite a slim girl. She was standing in a shifted position, shifted away from the pain. Unable to weight bear through that leg at all. She says she was kind of hovering on the bed so we could offload her.

It was difficult to do any range of movement stuff with her, because she couldn't even tolerate standing up. Sitted, she slumped; as soon as she went into slump the pain came on. As soon as she sat, pain come on. You couldn't put her in that position. With the Dermatomes, nine times they were fine. Her reflexes slightly high from my point of view, at that time.

[Mendid 00:27:11] put her into sideline and [pivened 00:27:13] her, and L4-5 reproduced her symptoms. Did some very gentle [Piven 00:27:19] stuff. That settled her down a little bit. I could get her into sitting to do a slump which was then found to be positive on both sides, due to the little bit more we could get, we could to do little bit more weight bearing. It helped the pain a little bit, sent her on crutches. Normally I could prescribe, but I couldn't because she was out of our area. Went to the GP, had a discussion with her about medication. I wanted to put her Gabapentin, or Pregabalin but we had a conversation and her hair was very important to her; so she declined that.

Nick: Does everybody get that reference? There's a 3% risk in women on Gabapentin that you'll have Alopecia. I saw a 15 year old girl yesterday who's been on very low dose Gabapentin for central sensitivity, and we started her on it and she was fine. Then I saw her two months yet, she came in, she's not lost, it's gone lifeless, her hair. Every time she puts her hand, and she comes out with handfuls of hair, so you have to stop it immediately. It doesn't happen to us blokes. I survived Gabapentin.

Bernie: So should we have the discussion about drugs? I wen through all the different medications, and we decided that Amitriptyline was probably the best suited for her. Gave her a leaflet about the why's and the wherefores. Contacted the GP, but she was still out that afternoon, and I asked him to prescribe it; and he's got her to have an MRI.

Nick: That was interesting cause things had changed by the time I saw her. She and I saw each other on the 16th of August, so three weeks ago. The history was exactly the same, and I did notice that Bernie, that she had actually given her some benefit in terms of reduction of back stiffness; but the leg hadn't changed at all.

So she's slim, listed to the left, Kyphotic at the Lumbar-Sacral junction, and couldn't get into neutral extension, so she was really bent over. She could not weight bear through that leg, and she stood up all the way through the consultation, and holding onto the back of the chair. She just couldn't weight bear.

Very restricted movement. Flexion was only two centimeters on the increase [inaudible 00:29:31] method. Six to nine should be normal. Bit of altered sensation around S1. What I found though is that she had pathologically exaggerated reflexes, globally. So she had gone central; she had developed central sensitivity between the time of seeing [Bernie 00:29:48] and the time of seeing me; and that's how quickly it can happen.

She had three beats of [inaudible 00:29:55] at both ankles but neutral plantars.

Speaker 1: The scan. Interesting. She's only 38, but she's got a grade one degenerative spondylolisthesis L3-4, but no stenosis. That accounts for probably quite a lot of her long-term back pain, but in these circumstances, of course, it's irrelevant, because actually it's just a coincidental finding. It might become relevant in years to come. We'll see, but on the basis that one in ten women over the age of 50 will have a spondylolisthesis, then, obviously, even 12 years younger, you're still going to have a small number who will have that, so what is it? One, two, three, four, five, six, seven.

Speaker 2: I was going to say, it's 3% in 20-year-olds, because there's a ... yeah.

Speaker 1: One of you has got one.

Speaker 2: Right, one has got one.

Speaker 1: Which one is it? Okay, so degenerative change L4-5, [inaudible 00:00:54] but really quite advanced degenerative change at five one. A large central lateral disc protrusion on the right side, compared to the left one over it as we thought. I said to Anna that she might start to make some clinical progress because big discs often do shrink. Just because you've got a big disk, doesn't mean necessarily you have to have an operation, clearly.

So I said, "See how she goes. Start some Pregabalin." Because she was worried about the Gabapentin and the hair loss and it doesn't happen to anything like as much with it's done with Pregabalin. I said, "Well, if in four weeks time, you just don't make much progress, then you're going to have to go and talk to a surgeon." That was how we left it. Then she contacted us and said, "Don't want to wait, I'm going to see the surgeon."

Speaker 2: She's going there tomorrow.

Speaker 1: She's in to see our colleague over in Cambridge tomorrow. If she's as bad as she was, then she'll need a microdiscectomy. I think the biggest indicator of whether somebody's going to get better or not, the interest is not what people think, is that if they can't sit down, if their sciatica stops them from sitting, that predicts that they won't get better and they'll end up needing an operation. If you see somebody who's got a big disc early on and they can't sit down, you can start to think, "Well, you're headed that way." Maybe that's the path of discussion you're going to have with them. It doesn't happen all the time but there was a paper a few years of the spine that started to show it was quite an important predictor.

In terms of treatment, anybody got any suggestions as to what else we might have managed? An early epidural might have made a difference. If you could get one early. You can't ... pain clinics, usually a lot worse post pain clinic.

Speaker 2: In turns out actually we're about to get the spinal pathway and to get them in within six weeks.

Speaker 1: Fantastic.

That's the National Back Pain and Radicular Pain Pathway.[crosstalk 00:02:59]

Speaker 2: It's all coming.

Speaker 1: Did you know I was a member of the Pathway? Fantastic. Well done.

Speaker 2: Yes. They're meeting next week.

There's a big Spinal meeting next month now too.

The pathways...

Speaker 1: Who comes to the Society for Back Pain Research? It's in Groningen in Holland.

Speaker 2: [inaudible 00:03:18] I'd like to be there.

Speaker 1: You can get a plane from South End that flies straight to Groningen. Members of the Society for Back Pain Research of which you are a member ...

Speaker 2: Indeed.

Speaker 1: we are now actually offered ... It's only a hundred pounds for the conference. You have to pay for your accommodations and to get there and back, but it's only a hundred pounds. Next year it's Sheffield which is a [inaudible 00:03:41] easier. And the one after that it's Britspine, which is a Wembley. The away day is probably not for most people.

It's interesting isn't it when go up someone who is really high strung and trying to cope and trying to do stuff. They...

Speaker 2: She was very high strung and it is the worst possible week she could have ever had [inaudible 00:04:05]

Speaker 1: [crosstalk 00:04:06] She was a [inaudible 00:04:08] person, so how come she came to you?

Speaker 2: Because her husband is one of our visitors.

Speaker 1: Of course, you did say that.

Speaker 2: Yes. They would've been [inaudible 00:04:15] looking after the children.

Speaker 3: Did she ever listen to you?

Speaker 2: No, she's very stoic. She's very stoic and she's looking after other things going on as well. She's having to look after lots of bits and pieces at this moment in time. So she's taken a lot of responsibility and this job is a new job. And there was stress with that, and so it was the whole kind of... it was[inaudible 00:04:42] she was probably on the most stress she could've ever ever been.

Speaker 1: The psychosocial components of this is huge. But of course, the biological basis is also huge. She was going for an interview, wasn't she?

Speaker 2: No she had the interview and somebody...[crosstalk 00:04:58]and she had the interview...

Speaker 1: She didn't want to be... seem to be ill or something like that so she had to turn up for work. She forced herself ... I can't be ill. That sort of syndrome. So I think is real suffering that way again.

Speaker 2: It's just a nightmare.

Speaker 1: That was interesting and we'll look forward to...

Speaker 2: Actually, she did go on holiday and she spent the whole time in the car on her knees.

Speaker 1: No, no. Once she came here ... you know how she arrived here from [inaudible 00:05:26]? She was kneeling on the front seat facing backwards with the seatbelt around the back.

Speaker 2: That's how she traveled to France.

Speaker 1: [inaudible 00:05:37] three kids in the back.

Speaker 3: That's how she traveled the whole way.

Speaker 2: [crosstalk 00:05:44] Right okay. Alex and Andy, Joshua White. Let's talk about Joshua. [inaudible 00:05:53] So who wants to start. Alex you talk first.

Alex: Andy starts and then I'll fill in the history.

Speaker 2: Andy off you go.

Andy: Okay, Joshua is a fifteen year old lad, who's a very promising goal keeper. He started to get back pain, lower back pain, about 2 years ago. He was seeing Alex around that time and Alex has done a lot of work with him. Essentially, he got a lot better but things were not quite right. There was something quite right and Alex noted it. He eventually asked for further investigations. He had an MRI done and he's got a Grade II spondylolisthesis. So he suffers with low back pain but he also suffers with [inaudible 00:06:43] hip pain. Nick sent him over to me. I've only seen him twice, but essentially Nick sent me a very confidential letter about Joshua with outlines with what Nick thought was going on which I absolutely agree with him in that predominantly the spondylolisthesis was causing him a lot of pain but also he was ... his pelvis was quite anteriorly tilted, which to a degree was maintained as spondylolisthesis, but also because of the position of the pelvis he was getting some aggravation of his ITB, but actually across the greater [inaudible 00:07:24].

When he came to me, he wasn't too bad and Alex and myself had been talking before the meeting to see me. And Alex pointed out something which made a lot of sense because when Joshua came with his parents they were very, very worried about the whole thing and they were very concerned that he wouldn't be able to play football. And he wouldn't be able to go and try for another club or anything. I spent a lot of time in my first appointment with them just explaining that actually this isn't too bad

and that if we do the right things that we should be able to treat it conservatively and there's a good chance that we can get him back to doing everything. What Alex explained to me was that when he was in the hospital seeing somebody about his back, there was a consultant in registrar talking who didn't realize he was behind the curtain and they said to each other "It's a real shame that his young lad was a promising goal keeper. He's never going to play football because of his injury." As we all know, it makes a huge difference psychologically especially if you believe these people know exactly what they're talking about. They came away from there presuming that Alex's career was over. Not only, sorry...

Alex: Joshua's

Andy: Sorry, Joshua's. Not only Joshua believed that, but his parents did. So it took quite a while to get both his parents and Joshua to understand that that wasn't the case and there was a very good chance that we could change things. Alex has done a lot of good work with him already. His core was very good but he was unable to bring his core in isolation. He had a lot of good understanding of his body and how it worked and in the first instance all I did was some gait re-education with him. And got him to bring his core on and posterior tilt his pelvis. Not by much, only about 5 or 10 degrees. And then we worked on allowing his hip flexors to release at the same time. Because initially when he brought his core on, everything was coming on. So his hip flexors, everything was coming on. So we worked at that and I sent him away. He came back 2 weeks later and, with his mother, his father wasn't there in that case, and both Joshua and his mother felt much happier. He felt he was in a lot less pain. I believe it was a lot more to do with the psychological element of it rather than the physical element. We then, at that meeting, we went on a lot of core work in supine because I wanted to get isolation of his core. I sent him away with some more...

Andy: Isolation of this court. I've sent him away with some more gateway education. Something I forgot to mention is that he's also got very flat feet with some hind foot collapse. I do think that orthotics further down the line will be beneficial, just for increased shock absorbency, but I'm not sure that it's that relevant at this moment in time.

Speaker 1: I don't know. When I looked at him first, stood him up there just in his underpants and his flat feet were out there-

Speaker 4: Is he tall?

Andy: Yes, very.

Speaker 1: He's tall and lanky.

Andy: [crosstalk 00:10:33]

Speaker 1: He's got flat feet. He's had a big growth spurt. He's got valgus knees. He's probably around nine degrees valgus knees, as you always do with those flat feet. Then, of course, he's having to do something with his hips, to do that. And on top of that, he's got that classical failure of [Pilates 00:10:51] is that where, actually, his pelvis is tilted right forward. You're pouring all the water out of the cup. Of course, that means his hip flexors are really tight.

He's then flipped his ITP forward, across his [trichanta 00:11:04]. That was the bit that, actually, I picked up that was really difficult for him to manage. Because he'd been seen by an orthopedic surgeon. They'd been

dismissed, that was the first thing. Then the orthopedic surgeon says, "Oh. Alright, alright. I'll do an MRI scan," because his mum had met her old boss, because she worked at a hospital and the orthopedic surgeon that she worked with met the old boss in the carpark and said, "Oh, you ought to have a scan."

The orthopedic surgeon that was actually treating him, almost dismissed him, said, "Well, yeah. Okay. Why don't we do a scan?" Thinking it was normal. The scan was done in April, and for three months, they heard nothing. Despite the fact that he's got a grade 2 spondylolisthesis, lytic spondylolisthesis. Just going through this, I put up two pictures here, both sagittals. Normal disc in a 15 year old is this lovely, bright, almost completely white signal there. All the discs up above the L4 and above L5... He's got a great, big spinal canal here, but there is his spondylolisthesis. He's got erosion at the front of the sacrum there, which means this has been going on for a long time. It's not as though it's sudden. It's not as though at age 11 or 12, he suddenly got a stress fracture and he slipped forward over the front of the sacrum. It's been molding.

So this is one the spondylosis that's come up probably when he's four or five, to begin with. Then as he's matured and grown, it's got worse. That's when you get into molding of the sacrum. He's got a lot of degenerative change in that disc. There's no high signal there at all. L4-5 is in sympathy, has degenerated, and he's got this retrolisthesis there. It's almost as though in these cases, you see the L5 vertebrae... It's almost as though the L5 vertebrae have been squeezed out, and the rest of the spine is trying to align itself.

If that's the case, and if L5-S1 is stable enough, then ignore L5. From your point of view, from a therapist point of view, ignore L5, because you've got continuity. If you draw a line down the back of L3, L4, and S1, you've got a normal alignment. All we have to do is ignore that for the moment, and the biggest problem we get, of course, is the L5 nerve root comes out through the frame and has to go over the disc and it gets squeezed. They get radiculopathy, but he hasn't got any of that.

Andy: No.

Speaker 1: He's got no radiculopathy at all.

Andy: No, which is fine.

Speaker 1: So we can ignore this, because effectively we could say, "That's going to stabilize." I saw a lad yesterday that Chris is going to see tomorrow, who's got also grade 2 spondylo, and he's 24, and he plays rugby for Ampthill. Plays number 6, so he's putting a lot of pressure through his back all the time. His looks like that, except he's now fusing 5 on 1. He's already got some spot welds.

So we know that, that natural history... When they get to it being like this is actually as you said, Andy, it's benign, because they've got stability there. Whatever's happening, they've got stability. Then what we've got to do is we've got to get their posture back, stretch out those hip flexors. I think, actually, getting the feet right early on and seeing a podiatrist early on is probably going to be quite important, so-

Andy: Fine. Yeah. Absolutely. It's definitely something that needs to be addressed. He's got significant overpronation and high foot collapse, as we say, so he's got these, got the varus.

Speaker 1: The other thing is, just going back to where there's a grade 1, grade 2, I actually did measure it. What the radiologist measured was the back of the sacrum to here before you get the erosion. What you should measure is where the front of the sacrum was, which is here. Actually, it's a grade 1. It's a marginal grade 2.

Andy: Sure.

Speaker 1: It's not even going towards a high grade one, so-

Andy: That's great news [crosstalk 00:14:48].

Speaker 1: Yeah, so reality is you could set up... That's 1.4 centimeters, and this is 4.6. Yeah, maybe just into grade 2, but it's not a high grade 1.

Andy: Because one of the big things I noticed when I first started chatting with the parents, that their perception of this was that this vertebrae was balancing on the other vertebrae and it could slide off and his back collapse at any time. I spent quite a while explaining to them that even though this has occurred and you've got a [inaudible 00:15:17] defect, there will be a lot of soft tissue around there, and that the two vertebrae are not going to suddenly disengage.

Speaker 1: The threat to him, of course, is that he might still have growth.

Andy: Of course. Yeah.

Speaker 1: That's the realest news here, and we know that after growth, the chance of a further slip is really minimal, if at all. But up 'til the end of growth, there is a chance. It's lower now, because he's getting towards the end of growth, isn't he?

Andy: I think he is.

Speaker 1: He's quite tall.

Andy: Because he's-

Speaker 1: I think he's taller than me.

Andy: Oh, god. He's got to 6'1"-

Speaker 1: 6'2"?

Andy: [crosstalk 00:15:50]

Speaker 1: [crosstalk 00:15:50] His father is tall. He's got tall relatives, hasn't he? His mother, she's quite tall. She's, what, 5'7", isn't she?

Andy: Yeah. [crosstalk 00:16:01] Just for possibly the osteopaths watching, when I first saw him, he's couldn't lie supine. His hip flexors were incredibly tight. I had to always him with his knees flexed on the table, if I was going to do any work. That scan doesn't show him. Obviously, he's lost some of the

[inaudible 00:16:18] curve in there, sort of the mid-lumbar spine. He's got really quite a flat thoracic. I don't know if you remember seeing that.

Speaker 1: Yep.

Andy: There was no evidence of a [step 00:16:29] on palpation, on palpation. Or I didn't feel like there was evidence of a step. Whilst I felt like there was some sort of structural instability and there was actually something relatively serious going on in his lumbar, when I discussed it with his mother to start off with, I said, "Look. We'll give this a go, but that's why I was trying to push to get it scanned from an early time." I think one of the things that's really important is that ultimately, like this scan shows, is that sometimes even though you don't necessarily have any specific evidence to say, "This is what I think it is, that there's going to be some slippage there," ultimately if you can get your local GP to refer you off, it's handy all. They can afford to have a scan, and it's handy to actually get these. I believe it's handy to get these things scanned.

Speaker 1: You're absolutely right. When you say there's no step, well, you're absolutely... If you look here, there isn't a step, is there?

Andy: No.

Speaker 1: Usually with these lytic spondylolisthesis, we do see that step. You see the shelf, and that's fine. You think, "Okay. Well, that's an easy spondylo to see." But-

Andy: I was going to say, do you think that's because that L5 does look like it's been shifted forwards a little bit, and looks like it's been more crushed than actually [crosstalk 00:17:41]-

Speaker 1: Well, I think because there's a developmental element here rather than it being an acute fracture, then everything has adapted around it. What you then go on is you really, the lordosis of that level there has been taken over by almost the spine ignoring L5. You're right. So I think in these development type cases, then there is a possibility that you won't detect it clinically because it doesn't look the same as somebody who, for instance, who's been a fast bowler, gone and got some stress fractures at the age of 11, 12, 13, or a gymnast, and then they've had an acute slip.

Andy: Yeah.

Speaker 1: And they get a listhetic crisis, don't they? What they get is that they go forward and they go, "Oh!" Like this. Belly comes out, everything tightens down here, all the hamstrings tightens out, and then you see that's tight because it's quite real. But this is a very gradual process, and I think there's a lot of adaptation here.

Andy: I actually... My principle was to improve function of upper lumbar spine and thoracic. I actually immobilized some joints, whilst I was careful. I was communicating with his mum and him all the time to ensure that they were happy with what I was doing. I kept it very minimally abridge. I did a bit of P&F on hip flexors. I did a lot of deep work into the hip flexors, which wasn't nice, but I think if you maintain a line of communication with the patient and you try and make sure that they're telling you if you're overworking, then you can back off a little bit. My concept was to hopefully improve compensation in the rest of the spine, and then over time

hopefully work out, whether it was through scanning, what the pathology was.

Speaker 1: I think that's the other thing, of course, is what you recognized was that you weren't actually making headway and said, "You've got to do something about this because we're not getting very far."

Andy: Of course.

Speaker 1: The real problem then became that, that opinion was not supported when they went to the hospital.

Andy: [crosstalk 00:19:37]

Speaker 1: That's really disappointing, that you've got an experienced therapist who knows what they're talking about, and that then they go to the hospital. You have an orthopedic surgeon who doesn't know what on earth they're talking about because they're not a spinal spur surgeon, and they dismiss that and just say, "Well, there's nothing wrong with you."

Andy: Yeah. You were right when you said that he was originally dismissed, which I was quite surprised about. At that time, I was speaking to his mum and saying... I know she's-

Andy: I was at that time, I was speaking to his mum and saying ... I mean I know she used to work at Woodland. So ultimately she had some contacts there but I was saying the same thing to her that it's just like ... keep pushing it. Find out whether they can actually do a scan, do some more investigations.

Speaker 1: Sarah, from a Pilates point of view, let's just sort of roll on a little bit then. Andy and Alex are going to get him to be functioning as best he possibly can. What has he got to do to maintain [crosstalk 00:20:27] because actually what you ... I've always had this firm belief for 20 odd years that the acute therapists get you where you're level and then you've got to do the maintenance. And the best maintenance is going to do Pilates. So realistically, he's got to see you or your colleague or something like that.

Sarah: He's got to learn to isolate the core.

Speaker 1: Which we're doing [crosstalk 00:20:49]

Sarah: Because that's obviously the important part or it. [inaudible 00:20:54] core is necessary.

Speaker 1: Yeah, and I think what's really important here because Alex had worked a lot with him and he had really strong core. [inaudible 00:21:03] he didn't have a strong core but when you started looking at him dynamically [crosstalk 00:21:07] his core was letting go at the time that it needed to be on.

Sarah: It was other than zero or 100% [crosstalk 00:21:13]

Speaker 1: Yeah but because he had a lot of association with his mover muscles with his core. In the first instance for me, we've got to get that isolation and contraction. Once we get that isolation and contraction, we can do generic core stability work, which obviously Pilates is a great one to do, but after that I think there's even more to do and that is to look at specifics of his

movement as a goalkeeper and then introduce those movements. [crosstalk 00:21:40] yes.

Sarah: When was that first diagnosed? As a child or the damage was done early on?

Speaker 1: I think his mum looked a bit shame faced when I mentioned it. I said, "You know, he's very flat footed." I mean it's a dynamic flat foot. You bring the big toe up and bowstring him and he's still got a bit of an arch there. So it's therefor amenable to orthotics. He said, "We tried orthotics in the past but we didn't persevere with it." So that's been kind of put to one side.

Andy: He's surprisingly flexible for a guy that height and that age. I was fully expected straight leg raise to be about 60% and it's not. It's 90. So I was really impressed with that and his calf complexes are similar. So I'm not saying he's hypermobile at all but he is pretty flexible and I just wonder whether he has slight upper [crosstalk 00:22:31].

Sarah: Has that been looked into at all, you know?

Speaker 1: No, not yet. He's not had a formal opinion yet and that's what I've urged him to do. That they need a formal podiatry opinion because if he's [inaudible 00:22:40].

Sarah: And he's very tall.

Speaker 1: He's tall et cetera. That whole chain, that kinematic chain is gonna be wrong from the base upwards isn't it and they've got to get that right first and I think actually unless they ... you need to talk to them and say, "You've got to get this podiatry sorted out."

Andy: They're very happy to do so. They've already spoke to me about it and I have to say, my opinion that that time was let's introduce what we need to do first, and once we get that moving than we'll get the podiatry [crosstalk 00:23:05]

Sarah: Is there any hyper mobility in the family? Do you know? Family history.

Speaker 1: Don't know.

Andy: Not that I'm aware of, no. [crosstalk 00:23:09] I don't think he's hypermobile. [crosstalk 00:23:12] He's more flexible. I would have expected him to be far less flexible.

Speaker 1: But the reason for that goes back to what Alex found and that is that Alex did not find a [inaudible 00:23:22]. This had all happened years ago and this is [inaudible 00:23:29]. So he didn't have the acute crisis that tightens up the hamstrings and then gives you all of that imbalance and the bad posture that's [inaudible 00:23:37] over a long period of time. And I think the problem that he presents with actually causes hip pain, his [trochantoic 00:23:43] pain, where his ITB's rubbing over his trochanter. And that then is effecting the imbalance of the pelvic and he sort of gone over threshold hasn't he? Where by he just can't maintain the right pelvic parameters to keep comfortable.

Andy: Yeah. I think his awareness. I think having overheard these consultants in the hospital that they're whole mind of completely taken up with he's going to be disabled for the rest of his life and we're be lucky if we can move a wheelchair, let alone play football again. So, it's classic. They didn't have

the answers and so they added two and two together and made six. You know?

Speaker 1: [inaudible 00:24:24] good example. Steven?

Steven: So I've got three questions that have come out or three observations about this particular case from our online viewers. Since we're on the subject of feet, someone has sent in this. They say, "I'm getting wicked results with bare foot. If the feet are flat due to lack of support rather than lack of mechanical function. Also focusing on switching on the antipronators but they feel they have to encourage mid or forefoot walking or it's a waste of time." Physio, as you're probably heavily into barefoot running or anti ... what's the thought?

Speaker 1: Is this actually using NBTs?

Steven: I don't ... not NBTs no. I imagine this is five finger technology vibrum or whatever. NTBs don't quite do the barefoot thing.

Speaker 1: Well, they were supposed to weren't they but you know it's supposed to be mimicking the [inaudible 00:25:12] but I was never quite convinced so.

Andy: For me, when I think somebody's flatfooted, my belief and understanding is that primarily the longitudinal and the transverse arch are maintained through ligament. And so if those are stretched, then it's very difficult to maintain or get them back but not so much in adolescence because obviously an adolescent can change because they're still growing. But I think in somebody who is fully grown, if they have flat feet and high foot collapse, it is very difficult to get that back to a point where it automatically, subconsciously remains.

Steven: I suspect this was asked by somebody who watched the broadcast with Matt Walden or maybe it's Matt Walden himself, I don't know, where he actually advocated some exercises which retrain the postural muscles of the feet.

Andy: Yep.

Steven: Because like you I wouldn't expect the active muscles, the tightness would be any good at recovering that arch. But it's hard work as I understood it to get that arch back.

Andy: I mean you can consciously contract them and you can create that arch but I think as soon as you consciously forget that's what you're trying to do, then I think you would return to a flat foot position and I think orthotics will maintain that position but I don't think they cure anything. I think if you wear them for 10 years and you take then out, then you will go back to the ... but that's just my opinion.

Speaker 1: Another problem is you [inaudible 00:26:32] and that then, you can't get that passive stretching back can you and that's because when you see it later on, when you get [inaudible 00:26:44] valgus and you've got [inaudible 00:26:46]. It just goes. But at this age, we don't know how long it's been going on. So there much be some potential to improve matters. I would hope.

Andy: With an adolescent I think you're absolutely right because they're continuing to grow then it's very important to try exercises and to attempt to return that arch to a degree.

Sarah: Does he improve at all with glute mod contraction instead of an isometric one?

Andy: I've got to be honest. I've only seen him twice and the first time was talking and the second time was really just trying to get them to understand the isolation of contraction. And they're fantastic. He is so attune to his body. I'm sure a lot of that is down to what you've done with him because he listens and he absolutely implements everything you do. So when I see him next, we're gonna move on further and do other things with him which obviously will include [crosstalk 00:27:42].

Speaker 1: What's the next question, Steven?

Steven: Well, two related questions about traction. One from Sarah who claims to be by the swimming pool drinking a gin and tonic at the moment.

Speaker 1: That's very nice.

Steven: I don't know in what country but ...

Speaker 1: But that's also very cruel.

Steven: She asked whether you'd consider traction with this and lady called Jo, who's newly qualified, says, "How about your inversion table. Would that be beneficial? Symptomatically at least."

Speaker 1: I'm not sure an inversion table would be actually because the trouble with that is that it's not going to necessarily stretch out the hip flexors and rotate the pelvic in the way we want. What we really want to do is to be able to get all of the things that were once dynamically changing his pelvic symmetry but have become fixed. That really is those hip flexors, the [inaudible 00:28:29] particularly. Those have got to be addressed and I just don't think you'll get that on an inversion table at this stage. It may be, when Andy and Alex have worked their magic and then Sarah's gone through this continuing process of keeping it that way, a traction table might be quite useful at times then and particularly actually I think doing upside down Pilates. Have you got much experience with that?

Sarah: No. Not at all.

Speaker 1: Have you not done Pilates on an inversion table. You should have told me. I'd put you on an inversion table. It'd be great fun. But there's actually quite a lot of Pilates you can do on the inversion table.

Sarah: To help with gravity?

Speaker 1: Yeah. I mean you can invert [inaudible 00:29:16] on the website. They invert to 90 degrees and they do all these little weird stuff et cetera. I think actually if you inverted about 40, 50 degrees then you ... Chris, you know more about inversion table than most people. What do you reckon about, if we get him to a stage where by he's got good pelvic rotation, he's stretched ... everything he needs to do at that point, is that going to help him.

Chris: In this case, I wouldn't myself. I was actually gonna come in and say that I think we've missed a complete trick here. That he's a goal keeper ...

Andy: And has anyone actually looked at his scapulothoracic strength, stability ... Really, we've got the floating multifidus coming under the thoracolumbar fascia. We've got someone that's going to be diving left of right, single hand, high [inaudible 00:00:13], going into an extension.

Nick: You see, this is the problem. That you don't the ball with wrong shape. [Andy 00:00:22] and I come from a tradition. We have no idea what goal keepers do for goodness sakes.

Andy: This is what I've looked at, is if he's diving left to right, he's naturally going to be going into an extension posture, opening up of his arm. Really, I think we also need to be looking at that side of things, doing a lot of stability work, so that you can look that. Because, he's someone that's not actually running around anywhere. He's got within 12 feet and an 18 yard box. The rest of it is actually going to be coming from the-

Nick: I'm very impressed that you know what the dimensions-

Andy: Thank you.

Nick: Of a football pitch are.

Andy: No, but-

Speaker 3: [inaudible 00:00:52] imperial measurements as well.

Nick: Imperial [crosstalk 00:00:55]

Andy: I think it would be quite important.

Nick: So, Andy, that's something that you'll then put into ... That's a great point. That's something I would have never even thought about because I just don't know about goalkeeping.

Andy: It's about any sport, isn't it? Once you've got that person generically stable, you then look at the movements that they've got to do. Then, you would implement that. Exactly right.

Speaker 3: Sometimes you find, or I've found, that when you're in the core, especially if you're in the multifidus can be quite hard if the thoracolumbar fascia is not good because we know that there's some floating attachments on there that aren't just [inaudible 00:01:28] directional. If we don't have that floating surface secure, then you may find the core is not actually going to function the way you want it to.

Nick: As you say, when he's reaching, he's going to automatically go into extension, which is the completely wrong-

Speaker 3: It's the reverse of what we want.

Andy: He's going to shut down.

Nick: Okay, let's move on to the next one.

Speaker 3: Between cases, can I just ask two that relate to Bernie's case? It's a simple question, one from [Claire 00:01:56] in London saying, "Do we know why she hadn't tried an epidural in the first place?"

Sue: She's only two month in then. She's only two months into her situation.

Speaker 3: It says here, "Given the higher incidence of pro outcome from surgery and those with central synthisization and the fact the patient had a relatively large acute disc, is there any merit in trying to persuade the patient to not resort to surgery, but use appropriate conservative care to try and buy time to allow the disc to resolve spontaneously?" Sorry, we're going back a long way-

Nick: No, no. That's fine, but that's absolutely right. That's a really good question, because what you don't want to be doing is rushing in. If you're the neurosurgical blinkered view, you've got a big disc. You've had a bit of sciatica for a few weeks. We should do an operation because we can. It actually should be, okay, let's give this as much time as possible. However, we've also got to balance her pain, her disability, and all the other things that are going on in her life to say when's the right time to intervene? She's now had it for three months. She hasn't made any significant improvement. Therefore, I think you can be pretty sure that she's not going to improve quickly, and therefore surgery at this stage is right. She's had the right length of conservative treatment. You know that I would never push somebody into surgery early, and I think now is about the right time.

Sue: She didn't want to have surgery either. To actually say that she wants to have it shows how desperate that she is now.

Nick: [Michelle 00:03:23], this is your case. This is [Joanna Baden 00:03:27].

Michelle: Good. You just can't help yourself, can you?

Nick: I promise, Michelle, that I wouldn't dump her in it, because I normally don't. As you all know, at these meetings, I promise I wouldn't dump her in it, but I couldn't find a case to involve [Bob 00:03:47] because Bob was going to take one for the team. I couldn't find the case, so I had to go and find a case that involved Michelle. No, it's all right. I'll do it. It's fine. This is about a person who's fractured. Now, she first came to see me in 1999 having fallen off a horse and got a T12 fracture. She is like all the people we've talked about tonight. She's a bit of a type A personality in some respects, but she's also quite dependent. I don't know if you found that, but she wants to be told exactly what to do. She needs parameters.

She had a T12 fracture in 1999, which we managed conservatively. Then, recently, she had another fall. Now, she's got an L1 fracture here. The big problem she's got, of course, now is she's got that really nasty thoracolumbar kyphosis with a hyperlordosis of the lumbar spine.

Sue: How old is she?

Nick: How old is she? She's 43. She's had 14 fractures in her life so far, mostly from falling off horses. I have suggested she ought to go and get ... She's slim. I have suggested that I think she's got some toxic habits in the past.

Sue: [inaudible 00:05:04] What about spotted protecture, which I hate wearing, but [crosstalk 00:05:09] might have helped.

Nick: It might have helped. It might have helped indeed. I agree. She's had rib fractures, clavicle fractures. She just doesn't stop falling off horses.

Sue: The body protector, the really expensive ones with the air, inflatable bits. It would have saved her.

Nick: But, you know how much they cost?

Sue: 400 pounds, and the refills are about 50 pounds each per canister.

Nick: That's good, because the ones for my motorcycle cost 1300 quid from BMW.

Sue: You're going in the wrong sport.

Nick: I've got a better helmet than you guys wear. That's fine.

Sue: Do you think she's more at risk, [Nick 00:05:41]? How she's had so many fractures, is there a risk element there from her as well?

Nick: Well, except they're not fragility fractures. They're all high traumatic fractures.

Sue: Traumatic fractures as well as fragility.

Nick: Actually, if it was a fragility fracture, I'd say, "Yes, she would be a high risk because the first one then predicts the second one, and subsequent, of course." But, actually these are all high trauma, so I think she's just careless.

Sue: [crosstalk 00:06:04]

Nick: Not yet. I did actually say it to her. I said, "Look." When I first saw her with this, I said, "Next week, I'm going to [Ixley 00:06:11] to get this nubular kit. It'll be the first one in the UK. It's radiation free, et cetera. [inaudible 00:06:17] that's about it. She went to see [Karen 00:06:21] doing her pilates, and she moaned, said, "All he wanted to talk about was his new bloody toy." When she came back to see me, I wasn't therefore minded to offer her a free scan with the new toy.

Michelle: Yet, even though she could, she didn't come to me. She wasn't my patient.

Nick: She was.

Michelle: Because, I was on holiday. She went to one of our colleagues. [Sue 00:06:43] saw her.

Sue: Me? I've just been sat here thinking who is this woman?

Michelle: She didn't come to me. That's why.

Nick: We've done it again, then, haven't we? We've wound you up again?

Sue: You've managed to stitch me, yes. Absolutely, thank you. Move on.

Nick: Anyway, the point about it was that when she first came to see me, she works, actually, as a secretary of the rare breeds association, which I'm told is quite an important thing in cows. She's very busy. She travels all over the place. She wanted to have everything put in a box. How much can I drive? This much, this much. How am I ... I said, "Well, I can give you some advice, but I can't rule your life." I hoped, actually, that she'd be coming on to you instead of whinged and moaning. That's fine. But, the problem here we've

got now, of course, is actually a 43 year old who's got this thoracolumbar kyphosis. I think that's what could be a real issue, isn't it? Her going forward, she's already got low back pain and has had that for a while. She's not that fit. Since you came back from holiday, has she come to see you again?

Michelle: As far as I know, she was referred on to Sue.

Nick: She was referred to you, and I think actually received by your colleague in your absence in the anticipation that she'd see you once you came back and do some hydrotherapy. Although, Sue does hydrotherapy as well.

Michelle: That's why she went to Sue instead of me because Sue did Hydro.

Speaker 3: Nick, I had an observation from my viewers saying, "Please stop picking on Michelle. It's not fair."

Michelle: I knew there'd be someone out there.

Andy: We all like it.

Michelle: A little bit too much [inaudible 00:08:23]

Nick: But, she reacts so predictably. It's wonderful. You wind her up and it's just like setting off that Duracell bunny.

Andy: She was the one that actually sent the message. That's the problem.

Michelle: Did you see me? [inaudible 00:08:37]

Nick: I want to show you a case which is actually ... It's just a word of warning, because there are some little features in it that are important if I can just do this. This is a man in his late 70s who presented to one of our very good physiotherapy colleagues with right-sided thoracic pain, upper thoracic pain. He was treated. [David 00:09:19] saw him and examined him and thought he had possibly a thoracic facet joint or something along those lines. So, he did some manipulations and some massage and some exercise, and he wasn't getting better.

Because he wasn't getting better, he said, "Okay, well, I don't much like thoracic pain that doesn't get better." It was a bit off the spine. It wasn't quite as far as the superioangular scapula. Anyway, he asked to see me. When I examined him, I was taking the history. He had a little cough. I said, "How long have you had the cough for?" He said, "Six weeks." I said, "Were you a smoker?" No. On his head, he had a skin graft. I said, "What was that?" He said, "Oh, I had a melanoma on top of my head. That was taken off, then they had to do a ... because, they didn't get the whole thing first time around." They did a repeat, so he got a skin graft there.

I said, "Well, is that okay?" Oh, yeah, yeah. I've been cleared. That's be fine. It was highly suspicious. So, I sent him off for a ... He was getting night pain. He was waking up every morning at 3:00 o'clock in the morning with pain, so he wasn't getting control of his pain. He was in quite a lot of trouble, so I sent him off for an MRI scan. The first thing you notice is that he got a bloody great big tumor here in his chest. It's a pancoast, first one I've ever seen. Never seen a pancoast before, but it's absolutely classical. [Papworth 00:10:48] was the primer of medicine, was my very first medical textbook in 1985, 1982 when I started clinical medicine. [Noah 00:10:55]

Papworth, and he gave a great description of a pancoast tumor of unlimiting pain, waking up at night time, upper thoracic, often coming up to here. Yeah, but then with a little cough. Then, sometimes they get a Horner's syndrome. He didn't have a Horner's syndrome, but it was just classic pancoast.

When you look on the axials ... Then, I could just do that properly rather than incompetently. That's a pretty big tumor there. Just looking here, again, looking up towards the head, this is the right side here. You see this mass of tumor invading back through the rib into the muscles. Of course, it's picking up the intercostal nerves, probably two intercostal nerves there to his side. He's a got a lot of neurological pain coming in toward the media side here. I thought actually that if he'd been given the all clear regarding his melanoma, that this might be a primary lung, but actually it's turned out he's had a biopsy, and it's a melanoma. So, it's a secondary melanoma. But, that was it. It's the very first diagnosis of a pancoast tumor I've made, and he's got this malignant diffusion here. I thought that was very astute of David, our physiotherapist colleague who was worried about him and his relatively short history, but all the red flags are flying there. Older man, thoracic pain, not getting better, night time pain, et cetera, wanted to get it looked at.

Sue: I had one like that, had exactly the same kind of history, came in. It was all red flags. Losing weight, night pain, he only got the pain also when he was sitting. So, I had everything, had the x-ray, didn't see anything, and still wasn't good. I went to treat him. I still wasn't very happy with it, sent him back. He had a second x-ray. It wasn't on the first. They'd missed it. They literally had just, where the x-ray had, they just had missed the area. It was just that little bit higher. It was there. They had just missed it.

Nick: We had a case. I don't know if you remember, last year I presented a case where we had a guy with a lower right thoracic pain that was persistent. Every time he breathed in, it was sore, but he would get rest pain as well. He'd been investigated. He had an MRI scan of his spine, and they'd said he was fine. I looked at him, and looked at his MRI scan, and you could see on ... I think it was his ninth rib on the right-hand side. He had an expansion on the MRI. There was a little bit of high signal in it.

We sent him for a CT because he had a deposit of myeloma in there. They went on, had it treated. It's all right. He actually went back to me when it was all over, because he'd been to see the bone, tumor people in Birmingham. They treated him and done ... he heard back in terms of these little spotters in my bone. I know they haven't all gone away completely, but they're controlled. He was very happy. So, he updated me, but yeah, I think 20 years ago, 25 years ago when the clinical standards advisory group reported, that was the very first guidance for back pain in the UK, really, preceded [NICE 00:14:22].

It was the [CSAC 00:14:23] report in 1994. They had thoracic pain as a red flag, but as we've gone on, it's sort of lost its redness. It's almost as though we think thoracic pain is actually almost acceptable now because people get thoracic pain from sitting and being unfit and all the other bits and pieces, so we kind of then lose our focus on how important thoracic pain might be but I think if we do get these cardinal features, it's really sort of a-

Sue: It's been a red flag for us.

Nick: Has it?

Sue: Thoracic pain and night pain [crosstalk 00:14:55].

Nick: Night pain in particular is-

Sue: The night pain and thoracic pain.

Andy: I had a guy I told you about that came to me with thoracic pain. He didn't have any other ... He had no red flags other than the fact he had thoracic pain, and I treated it, and it improved, but then it would come back. I treated him about three times over three weeks, and each time it improved and it came back. I said we needed to get a scan. I wrote to his GP, and his GP said that he didn't need a scan. His pain persisted, so I slated him to pay for a private MRI scan. He had a private MRI scan, and he had tumors everywhere. Unfortunately, it was too late. Not that it would have been ... Not that we could have done anything if we'd done it earlier, but it was too late, and he died.

Nick: Did I see him?

Andy: No, no, you didn't, but the worrying thing for me was that he didn't have horrendous night pain. He didn't have night sweats. It seemed mechanical. It came on with movement, and it improved with mobilization and soft tissue massage, which for me suggested that it wasn't a serious underlying problem. It was only the fact that I wasn't making it better long term that I wanted further investigation. Even if there isn't any other red flag, I think if things don't stay improved, then it's definitely worthwhile getting it scanned sooner rather than later.

Michelle: It's interesting to hear you say that because I think as osteopaths and chiropractors, we've got quite used to GPs dismissing what we think and what we've asked for, but I think it's quite reassuring for us to hear that even though you have probably more respect from the GPs that your requests get dismissed as well.

Sue: They seem to be dismissed more.

Andy: Increasing.

Sue: Because you're not allowed to. In Northamptonshire, you're not allowed to. The GPs are not allowed to x-ray or MRI. They've had those rights taken off them because they were MRI-ing and x-raying every single patient. There has to be a clinical reason. They were x-raying everything for no reason.

Michelle: We give them clinical reasons, and they still-

Sue: If you've got clinical reason, then they can.

Michelle: You have to be really detailed.

Sue: You have to be detailed. You have to tell them what you want it for.

Michelle: And why.

Sue: Because, if you just say this patient has got low back pain. I want it x-rayed, they won't do it.

Michelle: No, you have to-

Sue: You have to be clinical. You have to say why you want it x-rayed. You have to be clinical enough to say I want them to look at this nerve root. I want to know why ... I suspect that there might be a [spondalytis 00:17:41]. Please can you investigate for pars? They may do that, and they will do that if you give a good reason, but they won't do it ... What they object to and one of their reasons why is because I can't treat it until I know what's going on. The answer is if you don't know what's going on, why am I x-raying it?

Nick: It's highly disappointing to think that we have slipped so far into that automatic ... Let's organize a whole bunch of tests, and maybe we'll find out something that we can then sort out then. Because, actually, I never learned how to do clinical medicine very well. The number of times, and we said it today, didn't we, [Chris 00:18:18]? About the number of times that you see people who've come to see you, and they've been to see the GP, and they've not been examined. That is now. You don't get examined, do you?

Sue: [crosstalk 00:18:32]

Nick: How on Earth can you make a dignosis unless you take a history and examine the patient? Actually a history examination equals 99% of the diagnosis in most cases. It's astonishing to me. Actually, I support that. GPs should not be willy nilly sending people off for x-rays and particularly MRI scans. If you get an MRI scan reported by some teleradiologist somewhere in the other part of the world, he's going to put down or she's going to put down every single abnormality they put on there without any context at all. All you then get is a frightened patient because they've gone to see the GP, and the GP said, "Bloody hell."

Sue: No, to the GP does is they give them the MRI. So, they don't even explain it to them. They just go, "Here it is." At the very bottom, it says an orthopedic consultation is needed. The next patient comes in to us and they, in panic, you go, "It's just routine back pain."

Nick: This is the last case. This goes back to the bone density stuff, and it comes back to some of the work that I've been doing with the England Wales Cricket Board because we've been looking at fast bowlers and particularly interested in their risk of getting pars fractures and how we manage them, because we've got a generation of guys who are breaking down. The standard of care across the professional and non-professional game is very variable. We've got some people who are being looked after really well. They develop back pain.

They get scanned early. They get identification stress fractures or stress reactions. They get shut down at the appropriate time. Then, they get rehabilitated, and they're fine. But, then we've got people who are at the top of their game who are currently breaking down. These are people who should be playing for england. Now, I see quite a lot of the professional cricketers because i have an expertise in this. This is the young guy. He's got a really odd abnormality. This is his CT scan. This is his sagittal CT reformat.

When you look at this, let me see. That's his right side. He's a right arm fast bowler, which means he then overstresses his left side. We're looking at pathology of the left side. If you look at the posterior elements here on the right side, they all look pretty normal. Now, you can see on this picture here, the cursor shows where you are. Don't forget, looking up towards the

head. This is right side. This is the left side. As we come across to the left side, look at the shape and size of his posterior elements.

Can you see how much bigger they are? Already at the age of 19 or 20, he's overstressed his bone enough to make it much bigger and much denser. Suddenly here, to see this here, he's got a great big lump of bone around the back there with a fracture through it. Is this an exostosis? Is this a tumor? We don't know. It's not a classical pars fracture, but that's certainly where it's getting pain. Actually, it could well be that he's just so massively overloading that facet joint, you could see how if he comes into severe extension because he's got a bad delivery stride, that he could actually be pushing that facet joint against that stuff there. This is a reaction. It's almost like an osteophyte there, but it's actually interesting. When we look at the cross section of it, look at the size of that pedicle compared to that. They're very, very different, aren't they?

We're looking now through the English Institute of Sport ... There, there's a big lot. Look at that.

Sue: I see it now.

Nick: Huge high perch for the bone, and very, very different appearances on the two sides. The English Institute of Sport and the guys at [Lufpro 00:22:14], the clever bone scientists there were looking at the relative density and the change of bone density with people who are bowling and are bowling when they're injured, then when they're back to it to see if we can use bone density as a measure or actually how to get them back to fitness quickest.

Andy: Another big problem with the young cricketers that are coming through and are not under the guise of the top physios and the top strength and conditioning coaches is muscle imbalance because all they do is bowl. They don't actually ... Their coaches or the people they see don't recognize the fact that when you look at them from the back, they are a different shape. Soft tissue-wise, they're a different shape.

Nick: Saw a bowler yesterday, and the thing is, you look at it, and to get back to what Chris said, you look at the scapular thoracic articulation. If you get them to just do a static contraction of all of their muscles around there, you see the different shape. They're overdeveloped on one side, and then the other side, then they haven't got that pain. If they're able to [inaudible 00:23:13] on that left hand side or the right hand side, of course what it means is they're going to overstress the bone, and the bone will then respond to that. Then, they start to get trouble there. The other thing, of course, you'd get is if you look here. That little blob of bone there wouldn't be there.

That should be the flat lamina. That means that the stress on this side is then being transmitted through to the other side of the [inaudible 00:23:32] natural. This is a symmetrical problem. Then, of course, they can begin to break down on the other side. It's an interesting problem, but we are seeing more of this as we go through. We look for it more and identify it in bowlers more than having somebody who's had a pars fracture and then just said, "Well, that's it. The rest of your cricket life is gone." We can now hopefully pick it up earlier, prevent it happening, manage them, and actually get them through to maturity, which is 23, 24, when actually the bone will respond appropriately. They don't break down. It's in this immature age that they have a real problem.

Sue: That's what we're doing in our work when we get the children that come in with the low back pains. We're getting them all. We can't do them under 18. We're sending them back to the GPs to get them checked, x-ray. They come in with low back pain, it's 14. The number we're picking up is amazing. You would glean how many are coming through, but we're never being picked up. We've just become a little bit more sharper, too. It's not the cricketists. It's the gymnasts, all of them coming through. There's probably more than we think there are.

Andy: We see quite a lot of trampolinists as well to that.

Sue: Yeah, trampolines is a big one.

Nick: I'm now aware that it's half past 8:00.

Speaker 3: Yeah, we're very grateful for you sharing all this knowledge, and of you fellows letting us into your session. I've got one observation you will like. It goes back to your pancoast tumor. Somebody tells me that their brother had two tumors removed, which they found after he high sided his bike on Mansfield Corner at Cadwell Park. I thought as a motorcyclist, you'd like it. He broke a rib, and they x-rayed him, and they found the tumors.

Nick: That's fantastic. It shows you how beneficial motorcycling is. The top about that of course is actually ... because if he's high sided, that probably means he's been a sports bike. Going around Cadwell, which is a really tight, twisted up and down circuit, that's the sort of part goes with the territory, but at least they found that and dealt with it.

Speaker 3: That's it for this evening. Thank you very much for joining us. We'll see you next time.