

# Spinal Conditions

with Rajiv Bajekal

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## TRANSCRIPT

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Steven:

Good afternoon. Welcome to the Academy of physical medicine once again for our lunchtime CPD sessions. I'm joined today by Mr Rajiv Bajekal who is a consultant orthopedic surgeon at the Royal free in London and he specializes in lumbar spine problems and particular scientific, a disc decompression and so on. All the things you'd expect of a spinal consultant. And he's been a guest on our show before when he came in to give an excellent discussion on bone health. Rajiv, so nice to have you back again. Thank you for joining us.

Rajiv Bajekal:

You're welcome Stephen. It's great to be back. Actually

Steven:

Thank you. I was, I was saying just before we came live on air that, so actually I'm a little bit unprepared today cause we've been running a live course throughout the whole today and I haven't had a chance to look at your slides or anything else. Could you tell us a little bit about your team in London?

Rajiv Bajekal:

Yeah, so I'm part of this group called Total Orthopaedics London and I believe some of my colleagues are also joining you subsequently this week. And the following few weeks or so. So we cover all the body parts in in orthopedics and we work as a group and as a team. And you can see our mission statement there and we, we are a bit different because we actually cohesively work as a group. We not just a group for namesake. So if you send us a patient or if you refer anybody to us, then they get the expertise of the whole group. So we refer to each other or bounce ideas of each other, sometimes for more complex problems. And we consult all over actually, so it's not just central London, but we go into peripheral areas, not London and so on.

Steven:

I can pretty much guarantee that somebody is going to send in a question saying, Oh, you working at the moment and if so, what's the PPE are you using? So let's get that one out of the way straight away.

Rajiv Bajekal:

Yeah. So I mean at the bottom you can see that a lot of our consultations these days, patients are preferring a remote consultation. And we have this video platform called Trusteddoctor and it's quite effective. We can even examine people remotely, which is an unusual way of doing things, but it actually works quite well. We all use a standard NP 95 mask if we have to see somebody and also quite aware of everything that is required and we're provided with everything. If we do have to examine somebody, we haven't quite started operating but it's on the horizon. So in another two weeks we'll be starting some some private work and some NHS work also. We'll gradually start off.

Steven:

I suppose that begs the question then. You're a spinal consultant. You do, you operate on spines. What are you advising patients then when they come to you? I mean, surely some of them must be in reasonably serious need of surgery.

Rajiv Bajekal:

Well, I mean the most serious ones we still dealing with. So we do have some emergency cauda equina equina type work that still goes on. But yes. I mean we are reassuring a lot of people with, I mean most, most of them are in terrible pain. I mean that's the main thing we deal with. But because of like the lockdown, they're not active, they don't have to go to work. So those pressures are off in a sense. But we are managing them by talking to them and really telling them that we'll deal with them as soon as the lockdown's lifted and we are able to see people and deal with them.

Steven:

Yeah. Is there a physio therapy, osteopathic chiropractic element to your team as well?

Rajiv Bajekal:

We are linked up with the number of physiotherapy groups and we have some preferred partners so to speak. But and we have a couple of osteopaths who are working with us and who are part of your group also. And they were asking about you know, about the talks and Robert shanks is one of them and they will be on your group you know, attending those talks in the future. So yes.

Steven:

Robert regularly sends in questions. So I should expect Robert, if you're watching today, I shouldn't expect questions from you. What would you like to start with, Rajiv?

Rajiv Bajekal:

Okay. So I can kick off with a little story. And then if you move back one again, I'll take charge of the screen when we come onto the MRI scan bits because I'll start with a little story. And this is true. I mean this was a 38 year old woman of Hungarian origin who was working as a domestic cleaner in somebody's house. And she was hoovering when she noticed a sudden pool of water. She was hoovering and she realized that she was wet. She had wet herself and at the same time she noticed quite profound numbness going through her legs, but she was able to walk around. She wasn't in a huge amount of pain. And she actually jumped on a bicycle and got over to a local minor hospital where from where she was referred on to our A&E at Barnet. And I mean the story was unusual. It wasn't typical, but I'm sure, you know what, I'm coming to and if I can share this thing now and move on to what I want to show you. So apologies. This will just take a minute for me to,

Rajiv Bajekal:

Oops.

Rajiv Bajekal:

Yeah. So getting there. Sorry. That's right. So this was a lady who was who presented eventually with this MRI scan and it's the most dreaded and acute complication of this condition, which is a lumbar disc herniation. So you cannot probably spot that here. The spinal canal is relatively clear. The discs are normal over here, so they all look a bit like a coffee bean if you like. And it has that like grayish appearance with the darker shadow in between. But if you come down to this level here, L 5-S 1, which is at the lumbosacral junction, you can see there's a massive disc herniation over here, which is completely obliterating the spinal canal. And the reason why I suspect she didn't have any radicular pain, which is unusual, in other words, she didn't have pain going all the way down legs is

that the disc, as you can see on the cross sectional anatomy to the right of your screen is obliterating almost the whole of the quarter corner, which is this whitish little bean like structure over here.

Rajiv Bajekal:

It should normally be filling this entire space. So that has the cauda equina syndrome caused by a huge central disc herniation. So she was incontinent as a result of the S2,3,4 nerves being all severely compressed. But the S one nerve root, particularly to the right lower limb, as you can see, is seem quite free. So it's not tangled up within the disc. So she didn't really have too much in the way of leg pain. She had pure incontinence. It's an unusual presentation of this, but the reason I put it up is that this condition is rare, but it's one of those things that I just think everybody who's dealing with back should be extremely aware of. So what I would say is you know, it can present catastrophic. Usually it will give you bilateral leg pain. People will have some numbness in the perineal area.

Rajiv Bajekal:

Quite often they'll have acute incontinence as an immediate presenting thing, but very often you can get these other for form of the condition so you can have pure incontinence. This lady had no rectal tone and I had to take her to theatre to evacuate or remove that huge big disc herniation. So the critical thing with this condition is really to before somebody is completely incontinent because the recovery of the continence, in other words, the ability to hold their bladder and bowel really depends on how quickly you can intervene. One of the symptoms that you guys or you or your people who are treating backs may see somebody with is the fact that a patient may tell you that they are unable to feel their bladder filling up. So if they give you that bit of history that they are losing bladder sensation, then they probably have early stages of cauda equina. And this is before they've gone into retention and overflow as this lady did. And that has a better stage for us to intervene. We can pull them out of that quicker.

Steven:

Okay. Tell me, Rajiv is there are there other potential causes of being unable to feel your bladder filling?

Rajiv Bajekal:

Yes. I mean there are some neurological issues that can arise sometimes in people. So you know, I mean there are situations where you can get this kind of sensation with other neurological conditions, but it's extraordinarily rare for somebody to have in a numbness or numbness in my private areas and saddle areas as well as have incontinence, Franklin continents. And that has almost certainly you're dealing with the cauda equina syndrome that happens.

Steven:

And just in terms of etiology on this, I mean this is a young lady, I think you said 39, 38 (yrs). What would have given rise to such a severe herniation? Do you know? Did she have any idea?

Rajiv Bajekal:

No, I mean she had no real predisposing factor. I mean she was doing a bit of manual work so she was a cleaner and was often bending down and doing things. But very often there is no predisposing factor. I mean it's like any other degenerative condition. I mean there are factors in your lifestyle and

diet and quite often people who are very overweight may have more discogenic problems. But the cauda equina syndrome per se is rarely associated with anything. And it presents really acutely. But it's rare as hen's teeth but equally really diabolically important from the point of view of indemnity. And of course it does create a whole lot of problems for everybody who's in who encounters these patients because it is an emergency.

Steven:

Cool. What was the outcome for this lady?

Rajiv Bajekal:

Well, she did extraordinarily well. Luckily she was left with a permanent numbness in her left leg, but she recovered her bladder sensation. So what we tend to do is once we've done the discectomy as quickly as possible we tend to put in a catheter because the, the bladder can suffer from over distension and that gives rise to longer term issues. So we tend to put in a catheter and remove that at the earliest stage. So we were catheter clamping and she recovered bladder sensation quite quickly after the operation. We were able to remove the catheter subsequently. Okay. Should I move on to my next one or you have another one?

Steven:

Well, I did have one question. Of course. I mean, you had mentioned how critical it is that we, we recognize these cases in the early stages and that's been backed up by other speakers. In fact Nick Birch who might know you're, you're familiar with he said that in the past as well, but the critical thing versus, you know, what should we be looking for because it would be, I think if someone came in and said that they'd lost their bladder sensation, we think, okay, we're thinking cauda equina now. Are there other less obvious signs or symptoms that we might pick up that we should think more about in terms of clinical emergency?

Rajiv Bajekal:

No, I mean the rest is, you can get a similar sensation of numbness in that area without severe pain. From an annular tear. And you can probably see on the screen here at L4/5 which is the second disc from the bottom, you've got this blister like lesion here, the whitish high-intensity zone here, the back of the base. And that sometimes create some irritation around the nerves and gives you numbness. And people think they're dealing with the cauda equina syndrome, but it's the much lesser problem of an annular tear. So it's effectively just a tear at the back of the disk that has leaking chemicals around the nerves.

Steven:

But without the MRI we wouldn't be able to tell that. So we have to refer.

Rajiv Bajekal:

I mean, the other thing is people often will have stress incontinence, so you can get, you know, particularly middle aged women who had children in the past may have an element of stress incontinence. So every time they stressing or streaming at some activity, they can get a little squirt of urine. But the critical bit is that they get, they do have normal sensation in the perianal area and also have good bladder sensation. So it's not as big or catastrophic an issue.

Steven:

Do you know? Interestingly, I do and I'll shut up off this and let you move on. I promise. The one patient I remember distinctly with a quarter coin of problem didn't appear to think that his incontinence was a particularly serious symptom. I saw him midway through the morning after he turned up at work and he mentioned it to me in passing. Now he thought he was serious enough to mention to me as an osteopath. But he hadn't gone immediately to his GP or anywhere like that. And I suppose the point I'm trying to make is that patients don't necessarily realize that this is a very serious thing and maybe even a little bit guarded about admitting it.

Rajiv Bajekal:

It is quite extraordinary the story you're telling me. But yes, there is sometimes more insidious presentation. So it doesn't always present catastrophic as it did in this lady. But you can get a slower onset of incontinence and they're often soiling or wetting themselves and not saying much about it because they think it's a part of life of getting older. And so on. So yes, it's, it's equally important to pick those up from what they tell you. It's, it's one of the commonest sort of things of all presenting to A&E So we get a lot of referrals from physiotherapists and osteopaths, moderate about cauda equina. Everybody is worried about it, but I'd rather be see them and assess them ourselves. And quite often we get an MRI scan then the other way around of missing one of these. Yes. Okay. So moving on I mean this one is really a plain X Ray picture, but this is of a 60 year old man, a Caucasian man who's a runner and in fact belong to the running club of one of my chest physician colleagues. I don't know if you can all appreciate it, but I mean this is what a standard lumbar vertebra will look like. I don't know how many of you look at play next race, but that is a tricky one to pick up here. But there are actually two words to brave within that complex. And the, the, the way you can make that out is there is a posterial spinal process over here of that vertebra. And there's a spinus process below that, of this vertebra. So in fact, there are two vertebrae joined up over here. So this patient really had he, his symptoms were quite mild. He is an Irish chap who was in Ireland in January was involved in a bit of a road traffic accident. Somebody bumped into his car from behind and he had quite severe backache but talking nothing much of it related to that.

Rajiv Bajekal:

And in fact, he came into a hospital you know, pretty frightened. Well, no other symptoms. But it was in quite a lot of pain by the time this happened. So can anybody guess or I suppose I can't interact with you, but just to keep, so you were saying we're not able to interact with the audience readily. They can come in and they can talk in by texts, but because there's, you know, there's anywhere between 800 and 1200 people watching, it's more shouting at once. Okay. So this was interesting because because of his presentingCo features, I mean the key elements of asking the questions of whether the pain is severe enough to wake him up at night, whether it affects his day to day activities and whether there's a temperature. Now, this guy actually had a low grade fever, but it was about the time that covid was occurring.

Rajiv Bajekal:

So everybody was thinking more in line of covid. But in fact, this is a classic presentation of a discitis. So he came in in March and covid, as you know, hit the shores you know, around that time. But from January he was having backache with the low grade fever. So you've got to think of discitis and often the presentation of discitis can be quite insidious. So people may not give you the classic symptoms of very severe pain or a high temperature, but if they have their triad of things. So in

other words, they have a temperature, they have back pain and they often have renal angle tenderness. And this is often mistaken by GPs to think that it is a urinary tract infection, which is of course quite common in people with discounters and quite people common in women but not so common in men. So this guy went on to have an MRI scan and you can probably spot here. This is something called a STIR sequence. So on a STIR sequence I think it's, yeah, that's the, on a STIR sequence, the next one, Steven or two, two down.

Rajiv Bajekal:

Yeah. So yeah, that's the one. So on a stool sequence you can see the images are quite greening, but the critical element of this is that everything is black on this picture except fluid, fluid, fluid lights up as a bright signal. So you can see in the vertebra, all the vertebrae are grainy and blackish, but this vertebra has lit up quite like a Christmas tree. So this, the disc here, this is a normal looking disc. This disk on the other hand has disappeared. And you can see a high signal there and that is indicator of a discitis. So this is in fact a classic test. You can see the deformity here. The disc space here on the right has completely disappeared and it looks like a pretty awful condition. So if I move on to the next one, you'll get an idea.

Rajiv Bajekal:

From this can you I, if I don't think I can move the picture, but this here on the cross sectional anatomy, you can appreciate, there's a big soft tissue shadow over here. You can also see it on the sagittal images. There's a big shadow in front of the vertebra, and that has what we call an abscess. Now an abscess of this size, and it is quite a large volume abscess, is extremely unusual in pyogenic discitis. So in other words, an organism like staph aureus will rarely cause a big abscess like this. You can, however, see it if an abscess is caused by a low virulence organisms such as mycobacterium tuberculosis. So what you're looking at here is tuberculosis of the spine. And the reason I bring it up is that it doesn't always just occur in immigrants. It is increasingly seen in the local caucasian population.

Rajiv Bajekal:

Quite often they have very insidious symptoms, so they may just have dropped the weight a little bit without trying to, they may just have a little bit of nocturnal sweating so they can profuse diaphoresis is the symptom. They may just have intense back pain. So it's quite difficult to pick up. And unfortunately what happens is because it's difficult to diagnose and pick up, some of these patients have had antibiotics before they come to us, which means we can't pick up an organism. The, the best way of treating these is actually anti-tuberculosis treatment. But you do need to get a piece of tissue out. So we would do a biopsy of this vertebra and send that off for histology and culture and we can grow the organism, but it takes a good six weeks before we can grow mycobacterium tuberculosis and evaluate the sensitivity to have antibiotics.

Rajiv Bajekal:

But we'd often start these patients on anti-tuberculosis therapy. So the critical difference I suppose, is to make out to pick up discitis and as I said, the lead time to diagnosis on an average is about two months. It's not unusual for people to get missed. But you have to suspect it in somebody who has fever, who's got severe back pain and renal angle tenderness. People don't just get acute severe back pain that lasts for a long period of time. And if you think you have one of them that deserve an MRI scan and at least a blood culture, so they should be sent up to A&E quite often for that.

Steven:

Okay. I've got a few questions that have come in while you've been talking. Rajiv, you mentioned UTI is earlier on and Theresa has asked whether recurrent UTI is a common presentation alongside cauda equina.

Rajiv Bajekal:

Cauda equina or you mean discitis?

Steven:

Well, she's asked about cauda equina. You mentioned it in conjunction with this discitis. I know,

Rajiv Bajekal:

Yes. I mean cauda equina because it results in a bladder problem and there's often incontinence they can go on to getting coexisting urinary tract infections. But a discitis itself can coexist with also an element of urinary tract infection. In fact, you probably know Batson's venous plexus is a plexus of veins that is, that connects the prostate to the lumbar spine and its usual route of transmission of the organism. So people who get frequent UTI can often get discitis. And if we treat such a patient with an antibiotic, let's say, you know, seven days of Ciprofloxacin or the usual antibiotics that are used in urinary infections, they get better, they get better for a period of time, but then they come back with a raging discitis that is most severe. So the bigger danger is that people are inappropriately treated as a urinary tract infection than discitis.

Steven:

Okay. Dawn's asked a question about terminology. She says, could you clarify why you would use the terminology of herniation rather than prolapse in this or any other case?

Rajiv Bajekal:

I think they use quite synonymously. Very often a herniated disc and a disc prolapse are very similar. I mean the, the, there is a matter of semantics between the term extrusion and, you know, extrusion is effectively bursts through the posterior longitudinal ligament and is lying free in the spinal canal. Other people would call that same thing a sequestered disc, but it's just a matter of degree, I suppose to, some people prefer to call it a protrusion or a disc herniation if it's contained within the posterior longitudinal ligament of the spine.

Steven:

Jonathan asks, what's the recovery time from cauda equina surgery? And have you had any instances where you've missed cauda equina?

Rajiv Bajekal:

Well, the, the first thing is if you catch them late, so in other words, they have already had the incontinence, they don't recover. So you, sometimes people are in, in fact completely paralyzed from it and often have to be in a wheelchair with an indwelling catheter or self catheterization. So that is the worst case scenario. But luckily people come to a hospital they're often picked up quite early enough. I laughed about the second one as to whether we've missed any and fortunately because this



is what I do and there's the buck stops with me. It's quite rare for me to personally miss it. But we've had an incident where somebody, a young man age 45, came into our A&E complaining that he couldn't pass water. He was catheterized and literally sent home without any further investigations or even inquiring about whether his back was hurting. He had numbness and he represented, presented of course with agonizing severe leg pain the following day and had a huge disc herniation that required surgery. So it's not unusual to miss cauda equina. But if somebody has got a good story of bilateral leg pain and numbness in the perianal/perineal area and very intense back pain in the context of a bladder or bowel problems, then I think that's games, the games up. I mean, you should be able to make that diagnosis.

Steven:

Thank you. Susan asked about whether you could explain the renal angle pain aspect of this diagnostic triad.

Rajiv Bajekal:

Yeah. I mean renal angle tenderness classically is seen in upper urinary tract infections. So if you've got that, it means that the infection is quite serious and quite often in the triad as I called it, you often have co-existent renal upper urinary tract infection together with discitis. So if you've got pain in that area renal angle, it's also quite often just exclusively discitis because you get paraspinal muscle spasm and pain in that area. So it's quite important to pick that up as a sign.

Steven:

Okay. This one's remarkably specific. One of our viewers has asked, how can one have bilateral pain to the anterior fibres on flatulence but no provocation on sneezing or passing stool?

Rajiv Bajekal:

I I, I think if you've got a femoral erotica, I mean, what's being described here I presume is pain in the course of the femoral nerve, which is affecting the front of the ties as to why it should be on flatulence alone and not passing stools. I really don't think anybody could answer that. It must've been a very unusual presentation of somebody with an upper lumbar disc herniation. So somebody at L2/3 or L3/4 fairly high up, who's getting that that constellation of symptoms,

Steven:

What would your reaction be if that were the main symptom on presentation? The first presentation of a patient. So yeah.

Rajiv Bajekal:

Well I mean, if they've got thigh pain and they have otherwise a soft abdomen, I would refer them to an MRI scan if the pain's pretty intense. Yes. but I think you're, you really have to look for other causes of thigh, so you really have to look within the belly. It's unusual for that presentation. So you've got to look at everything else before you jump on the spine as being the source of all evil.

Steven:

And we've had several inquiries about discitis, does it generally happen around the the low T spine? And is that why the pain is around the costovertebral angle or they're asking?

Rajiv Bajekal:

No, it's often actually yeah, tobacco lumber junction is a common area, but you often get it in the lumbar spine itself. But you're quite right. That is one of the reasons why you get pain in that area between the, the last rib, if you like, and the spine. So namely where the, the kidney sits. So that's why you get renal angle tenderness quite often in that area. But it could occur anywhere in the spine really. It could occur even in the cervical spine for back.

Steven:

So you mentioned TB, Sarah asked how most people get ended up with discitis. Is TB the principal cause?

Rajiv Bajekal:

No, I would say pyogenic discitis is, is still by far, much more common. So staph aureus is the commonest causative organism, but TB is known and if you see as big an abscess as you're seeing on the screen behind you, Steven, so it's better seen on your screen because in my sharing, so huge abscess here, that's the one that's the one. And the kidney is next to it. As you can see on the cross-sectional anatomy. That's the kidney. Yeah. Yep. So you can see that big abscess. And that's why in such a situation for somebody to have such a big abscess if it's a pathogenic organism, namely staph, yes, you would expect the patient to be really, really ill. And this chap wasn't so sick at all. In fact, he was discharged because of covid because we couldn't attend to him properly.

Steven:

And you said the onset of pain in this chap who I think you said was 60 years old, was following a minor car accident.

Rajiv Bajekal:

That's correct. So often people tend to, the reason I put that in was just for discussion that often people attribute all their ill health to a minor road traffic accident. You know what I mean? Before that they were fine and then they had this minor incident and they, because everybody knows of this condition called whiplash, they tend to blame everything on it. And it really wasn't responsible for the TB here.

Steven:

Presumably it may have, it may have been the trigger, which which aggravated it to the extent that he used to be seen.

Rajiv Bajekal:

Yes. That's quite right. Yeah.

Steven:

Rajiv, we're down to our last quarter of an hour, so I'm going to let you move on it.

Rajiv Bajekal:

Well I'm glad it's stimulating a discussion to be honest. So yeah, let's, let's get through one or two more at least though.

Steven:

So I'm going to get the right ones up here.

Rajiv Bajekal:

Yeah, this is, this is an unusual one and the reason I bring this up is this chap, as you can see, has a disc that's bulging over here. And he already, he had an epidural injection for this smaller disc on the left side, so he had some sciatica or what he described as sciatica. The reason I brought up, because it's quite interesting is that his pain never went beyond his knee. And this is as you saw earlier, it's at L4/5 that the problem is and he didn't improve at all after an epidural type injection, which was unusual. And his pain intensity was so severe that there was something quite clearly wrong with him. So the reason I brought this up is sometimes you will encounter in your practices somebody that is really struggling with severity of pain and sometimes you just have to throw the book at them and investigate them and whatever else way that you can.

Rajiv Bajekal:

And he ended up having a SPECT scan. So that has a radioactive nuclear scan combined with a CT scan. So it's really a pretty drastic investigation to use in this day and age. And you know, ended up being found to have this condition. So I don't know if you can all see that on your screen, but this is again, lighting up like a Christmas tree. So this is the sacroiliac joint which is quite commonly something that a lot of you focus on. And we, we don't see it that often as being a source of problems. But you can see the one on the right of your screen is the normal looking sacroiliac joint. And this area, there's a big, it's actually in front of the sacroiliac joint right over there. So this guy had a discitis, well, he had an infection of his sacroiliac joint and we picked it up really because of the SPECT scan as he was being treated all the time as if he had a lumbar disc herniation.

Rajiv Bajekal:

But in fact he had a sacroiliac infection. So I guess again, it brought this up just to emphasize the point that sometimes these infections are really quite difficult to diagnose. And if somebody is in an unusual amount of pain before you label them nutters, it's worth investigating them further. Now, this I bring up, because you'll quite often see young people with back pain. So if a young youngster in his twenties or thirties is coming to you recurrently with back pain and they talk about stiffness and difficulty in getting out of bed in the mornings and so on then you have to think of this particular condition, which is ankylosing spondylitis. Now I bring this up because it's quite interesting, the x-ray findings are interesting. And you'd often be able to get it diagnosed on an X Ray. So you can see that the vertebrae are quite straight here.

Rajiv Bajekal:

So, in other words, there's something called squaring of the vertebrae. So you have ossification of the anterior longitudinal ligament. And here you can see that the sacroiliac joint in the pelvis, it's completely obliterated. So there's no space. Normally you should be able to see a clear space between the sacrum and the ilium. So the sacroiliac joint is really seen quite clearly in normal

patients. But because this chap has ankylosing spondylitis it is completely obliterated. Now you can pick up this condition by just simply doing a chest examination. So if somebody has a chest expansion of less than five centimeters, you've got to suspect ankylosing spondylitis, because it does affect synovial joints, so it causes stiffness of the cost of vertebral joints, so the rib with the vertebra. And so therefore the Le, the lungs don't fill up so well, it's an unusual condition, but it's worth remembering this in your young patients sometimes.

Rajiv Bajekal:

And this is his spine, which is typically described as a bamboo spine. So you can see it's curved forward. So there's an element of kyphosis and it's, it's quite disabling in the long term. I mean, this was an older patient actually, but one of the big issues that they complain about is that they can't look up above the horizontal. So they're looking at their feet all day because they, stiffened in that position. So it's quite an awful condition to see. Mmm. Now, tragically, all of us will inevitably come across a patient with cancer. Now, cancer is sometimes difficult to pick up, but the, the, the most important element of taking a history in somebody with cancer is of course the fact that the pain can be very, very severe. So if they have very severe pain that keeps them awake at night.

Rajiv Bajekal:

And more importantly, the single most important red flag in somebody with cancer is if they tell you they've had a history of a breast cancer or some of the cancer remotely in the past, you've got to think that they have cancer. And sometimes on an MRI scan, you see this depressing picture of a lot of vertebrae that are lighting up. So this is the stone sequence that I talked about. So all the vertebrae should be gray or black. But you can see a lot of them are damaged here. So the end plates are crushed and they have collapsed a bit. The vertebrae have collapsed and they're lighting up. So this is multiple secondaries in the spine. The spine is a, a favourite site for secondaries. And this is almost a terminal issue and quite often all we can do is fill them up with cement, which I'll show you about, but sometimes you can be caught out.

Rajiv Bajekal:

You know, this is a young man who came to me who's 45 years old with really quite severe back pain and he came in quite close to Christmas time. As you can see, the scan was done between Christmas and new year in 2018. And at first glance I mean most of you will see here the bottom of the spine, there is a spondylolisthesis. So there's a vertebra, L5 vertebra's slipped over the S1 vertebra. So it's moved forward a little bit over here and that has a condition called spondylolisthesis. And often it's responsible for back pain. And it's quite easy to focus on that being the cause. But what I missed on first glance was that higher up on the screen, can you see that where we hear this vertebra has collapsed right down and you can see it better.

Rajiv Bajekal:

On the subsequent view. I'll show you that later. But one of the critical things is to look at the whole scan and get the whole picture. So somebody is in very severe back pain. It's usually not a simple cause such as spondylolisthesis. And as I was showing earlier, we can sometimes do this elegant kind of operation. This is a spine Jack operation. So we go through the pedicle of the vertebra, which is this portion. So you can do a keyhole operation with just a little, a tiny incision and a drill into the vertebra and we can elevate the vertebra and fill it up with cement so that that patient with multiple secondaries, we did it at multiple levels. All the white stuff is actually bone cement to give pain relief

to the patient. So it's quite a gratifying procedure and an end of life procedure then. So this was the previous chap that I was showing you. Uyou can see better on this. Mmm. There is a malignant deposit here, so you can see the pedicle is enwalled actually and it's lit up quite heavily. So this is the same patient with the spondylolisthesis and a secondary deposit higher up. So it's important not to miss these because they are at the edge of the screen or some other such reason.

Steven:

Have a few questions before you summarize Rajiv. Sure. I know we've only got a couple of minutes left and obviously we're under a bit of time constraint here because of the course we're running. Mike has asked about Modic end plate changes. Could you say a word or two about those? How important it is to monitor them all?

Rajiv Bajekal:

Well, not then, but I mean, Modic described them so he immortalized himself, so to speak, I mean I don't think it's as important as some people make it out to be. It's a normal a process whereby you get changes towards the end plate of the word also around the disc area. And it's usually due to a degenerative change. So if you, if you look at a scan and they're Modic described it as three types of changes. So type one, type two and type three Type one is the more important one because it's what that shows up is that on a, on a saggital T 2 weighted image, you'll get whitish reactions, better high signal on T 2 and a low signal on T 1. What it means is that either your disc is not functioning so well, so there's some oedema around the end plate or there is quite possibly early infection.

Rajiv Bajekal:

So even people with discitis will have a type one Modic change. Type two is more chronic, so there's an element of fatty tissue. So it's basically you get a high on T 1 and on T 2 and type 3 is sclerosis of the vertebra. So really chronic thing. I don't think it's as important as made out to be because we generally, I mean, all of us do, we manage chronic back pain more by non-interventional methods rather than, I mean, it's a lifestyle issue rather than a serious pathology, but it's an, it's a useful thing to look at when you make a diagnosis. And you can help them by directing them towards more towards your field than mine really.

Steven:

Okay. Two final questions. If I may. Georgina's asked actually a question which bothered me at the time I came across that case. I mentioned if you have someone who you suspect of suffering a cauda equina syndrome, should you call an ambulance to get them to A&E or is it okay to say make your own way?

Rajiv Bajekal:

No, as long as they're certain that the patient's going to a and D, I would, and they're walking. I mean, it doesn't sound like this. The person you're referring is clearly an absolute agony and is you know, as very severe pain. I would send them if they're reliable and will make their way to, and the then you should just,

Steven:

Right. I'm off the hook because mine had to walk 200 yards. So st Thomas is hospitals and that's what I told him to do. So I'm glad my advice was sound. Hope to Georgina is happy with that as well. And the last one is anonymous, but somebody asked why infections lodge in certain joints? Is there anything that would predispose a person to such infections in a particular area?

Rajiv Bajekal:

No, I think it's a, it's usually a combination of factors. So it's the virulence of the organism and we hear that term bandied about because of the covid crisis. So it's the virulence of the organism. It's the susceptibility of the host. So in other words, somebody who's got other comorbidities, like diabetes really suppresses your your ability to fight an infection. And plus sometimes there's just a seeding in a particular area and that develops into an infection. So there's some mild trauma there, for instance, that can set it off.

Steven:

Rajiv, it's really kind of you to have joined us today and I should put up your summary slide. Is it okay for me to share the slides with everybody afterwards and make them downloadable? I know they're all anonymized, I think, aren't they? Yeah, I think yeah, that's fine. Absolutely fine. Yeah. Thank you very much. Well, thank you so much for coming back on the show. Thanks for sharing all that, that wisdom and experience with us and I'm very much hoping we'll see you again in the future.